

GENERAL:

**GENERAL:**  
A. THE STRUCTURAL DRAWINGS SHOW THE COMPLETED PROJECT. THEY DO NOT INCLUDE COMPONENTS THAT MAY BE NECESSARY FOR CONSTRUCTION SAFETY. THE CONTRACTOR IS RESPONSIBLE FOR SAFETY ON AND AROUND THE JOBSITE DURING CONSTRUCTION.  
B. STRUCTURAL NOTES SHALL BE USED ALONG WITH THE SPECIFICATIONS, WHERE THE STRUCTURAL NOTES, DRAWINGS OR SPECIFICATIONS DISAGREE, THE CONTRACTOR MAY REQUEST A CLARIFICATION DURING THE BIDDING PERIOD. OTHERWISE THE MORE STRINGENT REQUIREMENTS SHALL CONTROL.  
C. PROVIDE ALL TEMPORARY BRACING, SHORING, GUYING OR OTHER MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION.  
D. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL, ELECTRICAL AND PLUMBING WITH THE APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.  
E. VERIFY AND COORDINATE ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR INCONSISTENCIES.  
F. STRUCTURAL DETAILS: DETAILS ARE APPLICABLE WHERE INDICATED BY SECTION CUT, BY NOTE OR BY DETAIL TITLE. PROVIDE SIMILAR DETAILS AT SIMILAR CONDITIONS UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL REQUEST CLARIFICATION DURING THE BIDDING PERIOD OTHERWISE THE MORE STRINGENT REQUIREMENTS SHALL CONTROL.  
G. TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNO. H. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SLAB ELEVATIONS AND SLOPES NOT NOTED.  
I. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN [ARIZONA].  
J. CHANGES TO THE DESIGN OF THE STRUCTURE WHICH ARE PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW BY THE STRUCTURAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL STRUCTURAL AND NON-STRUCTURAL ELEMENTS AFFECTED BY THE PROPOSED CHANGE. THE COST OF ANY DESIGN WORK NECESSITATED BY SUCH A PROPOSED CHANGE SHALL BE BORNE BY THE CONTRACTOR.  
K. THE COST OF DESIGN WORK RESULTING FROM ERRORS OR OMISSIONS IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR.  
L. CONTRACTOR SHALL PROVIDE COMPLETE STRUCTURAL ANALYSIS, DESIGN AND DETAILS OF ALL STEEL STAIRS. CONTRACTOR SHALL SUBMIT THIS DATA TO THE ARCHITECT FOR REVIEW BY STRUCTURAL ENGINEER.  
CONTRACTOR SHALL FIELD MEASURE THE STAIR DIMENSIONS IN PREPARING THE SHOP DRAWINGS.  
CONTRACTOR SHALL ALSO FIELD VERIFY THE LOCATION OF EMBEDS PROVIDED FOR SUPPORT OF STAIRS.  
FABRICATE ONLY AFTER ACCEPTANCE OF DESIGN BY ARCHITECT AND STRUCTURAL ENGINEER.  
M. BUILDING TOLERANCE SHALL BE BASED ON THE REQUIREMENTS OF THE AISC CODE OF STANDARD PRACTICE AND ACI 117, STANDARD SPECIFICATIONS FOR CONCRETE CONSTRUCTION AND MATERIALS.

LIGHT GAUGE STEEL NOTES:

1. ALL LIGHT GAUGE STEEL STUDS, JOIST, TRACK & MISC. SHAPES MILL CERTIFIED STEEL TO MEET:  
A. ASTM A1003 ST GRADE 50, TYPE H 43-97 mil GALV. STEEL  
B. ASTM A1003 ST GRADE 33, TYPE H 18-33 mil GALV. STEEL

2. ALL STEEL STUDS, JOIST & TRACK SHALL HAVE A LEGIBLE LABEL, STAMP OR EMBOSSEMENT, AT A MAXIMUM OF 48" ON CENTER, INDICATING THE MANUFACTURER'S NAME, LOGO OR INITIALS, ICC EVALUATION SERVICE REPORT NUMBER, THE MATERIAL BASE METAL THICKNESS (UNCOATED) IN .001 in. AND THE YIELD STRENGTH IF DIFFERENT THAN 33 ksi.

3. MILL CERTIFICATES FROM THE COIL PRODUCER SHALL BE MADE AVAILABLE IF REQUESTED. MILL CERTIFICATE TO INCLUDE AS A MINIMUM THE CHEMICAL COMPOSITION, YIELD STRENGTH, TENSILE STRENGTH, ELONGATION, AND COATING THICKNESS.

4. SECTION PROPERTIES:

350S150-43

FLANGE / LEG WIDTH  
(IN 1/100 in)

THICKNESS  
(IN mils (1 mil = 1/1000 in))

MEMBER DEPTH  
(IN 1/100 in)

SECTION TYPE:  
S=STUD OR JOIST SECTION  
T= TRACK SECTIONS  
U=CHANNEL SECTIONS  
F=FURRING CHANNELS SECTIONS  
Z=ZEE SECTIONS

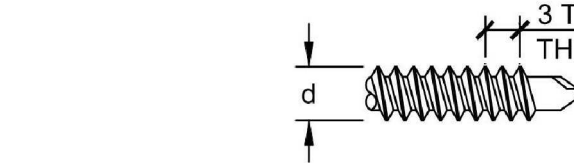
\*\*THIS PROJECT WILL BE BUILD USING  
FRAMECAD @ MACHINERY FOR AUTOMATIVE LGS  
CHANNELS PRODUCTION. THUS, T-SECTION IS  
REPLACED BY S-SECTION FOR ALL TRACKS,  
STUDS BLOCKING, TRUSS CHORDS WHERE  
TYPICALLY T-SECTION IS IN USE.

MINIMUM DELIVERABLE THICKNESS (mils)	GUAGE	DESIGN THICKNESS (INCHES)
27	22	0.0269
33	20	0.0346
43	18	0.0451
54	16	0.0566
68	14	0.0713
97	12	0.1017

5. STUDS AND TRACKS THAT COMPRISE A HEADER, STRONGBACK OR SILL SHALL NOT BE SPLICED. CURVED HEADERS, STRONGBACKS, AND SPANDREL TRACKS SHALL BE STRETCH FORMED, CLIPPING OR CRIMPING OF FLANGES OR WEBS IS NOT PERMITTED. IF OTHER PROPRIETARY CURVED PRODUCTS ARE PROPOSED THEY SHALL BE SUBMITTED TO DEVCQ, WITH APPROPRIATE CALCULATIONS AND/OR TESTING, FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

6. EXTERIOR AND INTERIOR FRAMING, SHEATHING AND FINISH MATERIAL SHALL NOT BRIDGE DEFLECTION JOINTS (COMPENSATION CHANNEL), SEISMIC JOINTS, EXPANSION JOINTS, OR ANY LOCATION WHERE DIFFERENTIAL MOVEMENT OF THE STRUCTURE IS EXPECTED. EXCEPT AS SPECIFICALLY DETAILED WITHIN, SLIP JOINTS SHALL BE INSTALLED BETWEEN FRAMING SUPPORTED BY DIFFERENT FLOORS/ROOFS), FOR EXAMPLE, A VERTICAL SLIP JOINT SHALL BE INSTALLED BETWEEN A SOFFIT HANGER AND A WALL.

7. SCREW VALUES USED IN DESIGN MEET 2016 "NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF LIGHT GAUGE STEEL STRUCTURAL MEMBERS" (AISI S100-16w/s1-18) INCLUDING THE 2016 SUPPLEMENT SECTION J4 FOR SCREW CONNECTIONS. SCREWS TO CONFORM TO SAE J78.



8. WELDING:
- A. WELDING TO BE PER AWS D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL".
  - B. WELDS TO BE INSPECTED PER APPLICABLE BUILDING CODE.
  - C. MINIMUM E60XX ELECTRODES.
  - D. USE LOW HYDROGEN ELECTRODES FOR WELDING SHEET STEEL TO AROUND THE JOBSITE DURING CONSTRUCTION.
  - E. ELECTRODES MUST BE ACCEPTABLE (PER THE ROD MANUFACTURER) FOR USE IN SEISMIC APPLICATIONS.
  - F. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH A ZINC RICH PRIMER.
  - G. FOR MATERIALS LESS THAN OR EQUAL TO 0.1242" THICK, DRAWINGS SHOW NOMINAL WELD SIZE. FOR SUCH MATERIALS THE EFFECTIVE THROAT OF WELDS SHALL NOT BE LESS THAN THE THICKNESS OF THE THINNEST CONNECTED PART.

CONCRETE:

1. CONCRETE MATERIAL PROPERTIES- FOUNDATIONS:  
28 DAY COMPRESSIVE STRENGTHS ARE TO BE 3000 PSI UNLESS NOTED OTHERWISE.  
USE TYPE II PORTLAND CEMENT, UNO.
2. CONCRETE MATERIAL PROPERTIES- WALLS: 28 DAY COMPRESSIVE STRENGTHS TO BE 4000 PSI. USE TYPE II PORTLAND CEMENT.
3. CAST IN PLACE CONCRETE:  
a. SPACING OF CONSTRUCTION JOINTS OR CONTROL JOINTS IN WALLS EXPOSED TO VIEW SHALL NOT EXCEED 40 FEET UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.  
b. CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS AND SPECIFICATION FOR SPECIAL SLAB TREATMENTS AND VAPOR BARRIERS REQUIRED FOR FINISH FLOORING.  
c. TO REDUCE THE EFFECTS OF CURLING OF SLABS, USE THE LARGEST PRACTICAL MAXIMUM AGGREGATE SIZE AND/OR THE HIGHEST PRACTICAL COARSE AGGREGATE CONTENT. AVOID A HIGHER THAN NECESSARY CEMENT CONTENT. USE POZZOLAN OR SLAB SUBSTITUTES.  
d. CONCRETE SLABS ON GRADE SHALL BE A 4" MINIMUM THICKNESS WITH W/F#6 @ 12" O.C. UNO. INSTALL OVER 4" MINIMUM ABC FILL. REFER TO SOILS REPORT FOR ADDITIONAL INFORMATION.  
e. PROVIDE EXTRA REINFORCING AROUND ALL OPENINGS EXCEEDING 24 INCHES SQUARE OR ROUND IN ALL SLABS AND WALLS EQUAL TO TWO # 5 BARS ON FOUR SIDES AND EXTEND TWO FEET BEYOND THE OPENING.  
f. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CORNERS OF CONCRETE UNLESS NOTED OTHERWISE.  
g. PROVIDE CLASS B LAP SPLICES FOR ALL REINFORCING UNLESS NOTED OTHERWISE.  
h. PROVIDE ISOLATION JOINTS AROUND ALL COLUMNS AT ALL EXPOSED SLAB ON GRADE AREAS.  
i. DO NOT USE FLY ASH, EXCEPT IN FOUNDATION CONCRETE.
4. REINFORCING STEEL:  
a. ALL BARS #4 AND LARGER TO BE ASTM A 615, GRADE 60. ALL #2 AND #3 BARS TO BE ASTM A 615, GRADE 40. DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH ACI 318, LATEST ADOPTION.  
b. WELDED WIRE FABRIC TO BE IN ACCORDANCE WITH ASTM A 185.  
c. ALL BARS INDICATED ON THE PLANS TO BE WELDED SHALL CONFORM TO ASTM A 706 (GRADE 60).  
d. NO TACK WELDING OF REINFORCING BARS SHALL BE ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE BY THE STRUCTURAL ENGINEER.  
e. MASONRY WIRE JOINT REINFORCING TO BE ASTM A 82.  
f. MINIMUM CONCRETE COVER FOR REINFORCING BARS TO FACE OF BARS INCLUDING TIES AND SPIRALS.  
1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"  
2. CONCRETE EXPOSED TO EARTH OR WEATHER:  
#6 BARS AND LARGER: 2"  
#5 BARS AND SMALLER: 1-1/2"  
g. SUBMIT PLACING DRAWINGS PER ACI DETAILING MANUAL, ACI SP-66, FABRICATE ONLY AFTER REVIEW AND APPROVAL.  
h. UNLESS NOTED OTHERWISE, SLAB REINFORCEMENT SHALL NOT BE CUT AT PLUMBING OR OTHER OPENINGS. SPREAD REINFORCEMENT AROUND OPENINGS.  
i. LAP SPLICES, UNO, SHALL BE CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318. LAP SPLICES IN CONCRETE COLUMNS SHALL BE STANDARD COMPRESSION LAP SPLICES.  
5. DRYPACK:  
a. DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR EQUIVALENT. INSTALL DRYPACK UNDER BEARING PLATES BEFORE FRAMING MEMBER INSTALLED.  
b. AT COLUMNS, INSTALL DRY PACK UNDER BASE PLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION.  
6. NOTES ON CRACKING OF CONCRETE STRUCTURES:  
a. CRACKING IS INHERENT TO THE MATERIAL PROPERTIES OF CONCRETE CONSTRUCTION. WHILE EVERY EFFORT HAS BEEN MADE TO MINIMIZE THE EFFECTS OF UNSIGHTLY CRACKING, THE PRESENCE OF CRACKS ARE NORMAL AND UNAVOIDABLE.  
b. THE DESIGN OF CONCRETE STRUCTURAL ITEMS HAVE BEEN ANALYZED USING A "CRACKED SECTION".  
c. THE PRESENCE OF CRACKING SHOULD NOT BE CONSIDERED DETRIMENTAL TO THE STRUCTURE AND ITS PERFORMANCE.  
d. CRACKS LARGER THAN 5 MILS SHALL BE FILLED AND SEALED WITH AN APPROVED CRACK FILLER TO PREVENT FUTURE DETERIORATION.  
e. ALLOWANCE SHALL BE MADE IN THE CONSTRUCTION BUDGET FOR SEALING OF SUCH CRACKS.  
f. IN SOME CASES, CRACKS DO NOT APPEAR UNTIL WELL AFTER CONSTRUCTION HAS BEEN COMPLETED. IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN THE STRUCTURE PROPERLY OVER THE LIFE OF THE STRUCTURE. CONCRETE CRACKS, SHOULD THEY OCCURE, SHALL BE FILLED AND SEALED

MASONRY:

1. GENERAL:  
a. NORMAL HOLLOW C.M.U. TO BE ASTM C 90, GRADE N-1 AND HAVE A MINIMUM f'm OF 1500 PSI. MORTAR TO BE TYPE "S". GROUT FILL TO BE 2000 PSI AT 28 DAYS. SEE CONCRETE FOR REQUIREMENTS FOR REINFORCING.
2. MASONRY REINFORCING:  
a. C.M.U. WALLS ARE TO HAVE #5 VERTICALS AT 32" O.C. WITH #5 VERTICALS AT ALL CORNERS, ENDS, JAMBS, INTERSECTIONS AND BOTH SIDES OF CONTROL JOINTS; TYPICAL UNLESS NOTED OTHERWISE.  
b. C.M.U. WALLS ARE TO HAVE #5 HORIZONTALS AT 48" O.C. TYPICAL UNLESS NOTED OTHERWISE.  
c. HORIZONTAL JOINT REINFORCING IS TO BE STANDARD TRUSS TYPE JOINT REINFORCING AT 16" O.C. (MINIMUM 2#9 GAGE WIRES).  
d. ADDITIONAL VERTICAL REINFORCING SHOWN ON PLAN IS IN LIEU OF TYPICAL REINFORCING. PLACE ONE BAR PER CELL IN SOLID GROUT. EXTEND BARS A MINIMUM OF 30 BAR DIAMETERS BEYOND THE FLOOR OR ROOF LEVEL ABOVE.  
e. BUILDING WALLS ARE TO HAVE 2 #5 BARS CONTINUOUS IN A MINIMUM 8" DEEP BOND BEAM AT ALL [ROOF AND FLOOR] LEVELS UNLESS NOTED OTHERWISE.  
f. BUILDING WALLS ARE TO HAVE 1 #5 BAR CONTINUOUS IN A MINIMUM 8" DEEP BOND BEAM AT THE TOP OF ALL PARAPETS UNLESS NOTED OTHERWISE.  
g. PROVIDE A MINIMUM OF 2 #4 BARS X (THE WIDTH OF THE OPENING PLUS 4'-0") IN A MINIMUM 8" DEEP BOND BEAM BELOW ALL WINDOW AND MECHANICAL OPENINGS UNLESS NOTED OTHERWISE.  
h. BOND BEAM REINFORCING IS TO BE CONTINUOUS THROUGH CONTROL JOINTS. DISCONTINUE TYPICAL JOINT REINFORCING.  
i. REINFORCEMENT LAPS SHALL BE A MINIMUM OF 48 TIMES THE DIAMETER OF THE SMALLER OF THE TWO BARS UNLESS NOTED OTHERWISE. WHERE BARS ARE OFFSET THE MINIMUM LAP SHALL BE 48 BAR DIAMETERS PLUS THE DISTANCE OFFSET.

3. MASONRY LINTELS:  
a. ALL REINFORCING IS TO EXTEND A MINIMUM OF 2' 0" BEYOND THE JAMB AND TO BE GROUTED SOLID FOR THE ENTIRE DEPTH INDICATED.  
b. ALL CONCRETE MASONRY UNITS USED IN THE LENGTH ARE TO BE "OPENEND" TYPE, TO INSURE FULLY GROUTED HEAD JOINTS.  
c. ALL LINTELS ARE TO BE PROPERLY SHORED FOR THEIR WEIGHT PLUS ANY CONSTRUCTION LOADS AND Laterally BRACED TO PREVENT ANY LATERAL MOVEMENT FOR A MINIMUM OF 7 DAYS AFTER GROUTING, UNLESS NOTED OTHERWISE.  
4. MASONRY GROUTING PROCEDURES:  
a. GROUTED MASONRY SHALL BE CONSTRUCTED IN SUCH A MANNER THAT ALL ELEMENTS OF THE MASONRY ACT TOGETHER AS A STRUCTURAL ELEMENT.  
b. PRIOR TO GROUTING, THE GROUT SPACE SHALL BE CLEANED SO THAT ALL SPACES TO BE FILLED WITH GROUT DO NOT CONTAIN MORTAR PROJECTIONS GREATER THAN 1/2", MORTAR DROPPINGS OR OTHER FOREIGN MATERIAL.  
c. GROUT MATERIALS AND WATER CONTENT SHALL BE CONTROLLED TO PROVIDE ADEQUATE FLUIDITY FOR PLACEMENT, WITHOUT SEGREGATION OF THE CONSTITUENTS AND SHALL BE MIXED THOROUGHLY. SEGREGATION OF THE GROUT MATERIALS AND DAMAGE TO THE MASONRY SHALL BE AVOIDED DURING THE GROUTING PROCESS.  
d. THE GROUTING OF ANY SECTION OF WALL SHALL BE COMPLETED IN ONE DAY WITH NO INTERRUPTIONS GREATER THAN ONE HOUR.  
e. BETWEEN GROUT POURS, A HORIZONTAL CONSTRUCTION JOINT SHALL BE FORMED BY STOPPING ALL WYTHES AT THE SAME ELEVATION AND WITH THE GROUT STOPPING A MINIMUM OF 1 1/2 INCHES BELOW A MORTAR JOINT, EXCEPT AT THE TOP OF THE WALL WHERE BOND BEAMS OCCUR. STOP GROUT POUR A MINIMUM OF 1/2 INCH BELOW THE TOP OF THE MASONRY.  
f. ALL CELLS AND SPACES CONTAINING REINFORCING BARS SHALL BE FILLED WITH GROUT. GROUT SHALL BE PLACED SO THAT ALL SPACES TO BE GROUTED DO NOT CONTAIN VOIDS.  
g. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING BEFORE LOSS OF PLASTICITY IN A MANNER TO FILL THE GROUT SPACE. GROUT POURS GREATER THAN 12 INCHES SHALL BE RECONSOLIDATED BY MECHANICAL VIBRATION TO MINIMIZE VOIDS DUE TO WATER LOSS. GROUT POURS 12 INCHES OR LESS IN HEIGHT SHALL BE MECHANICALLY VIBRATED, OR PUDDLED.  
h. WHERE GROUT POURS EXCEED 5 FEET, CLEANOUTS SHALL BE PROVIDED IN THE BOTTOM COURSE AT EVERY VERTICAL BAR LOCATION BUT SHALL NOT BE SPACED MORE THAN 32 INCHES ON CENTER FOR SOLID GROUTED MASONRY. GROUT SHALL BE PLACED IN A CONTINUOUS POUR NOT TO EXCEED 16 FEET IN HEIGHT, AND IN GROUT LIFTS NOT TO EXCEED 6 FEET.  
i. REINFORCING SHALL BE CONTINUOUS THE FULL HEIGHT OF THE GROUT POUR PLUS ANY REQUIRED LAP ABOVE. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT PRIOR TO GROUTING BY WIRE POSITIONERS OR OTHER SUITABLE DEVICES AT INTERVALS NOT TO EXCEED 200 BAR DIAMETERS NOR 10 FEET.  
j. TOLERANCE IN THE PLACEMENT OF STEEL IN WALLS AND FLEXURAL ELEMENTS SHALL BE PLUS OR MINUS 1/2 INCH FOR "d" EQUAL TO 8 INCHES OR LESS, PLUS OR MINUS ONE INCH FOR "d" EQUAL TO 24 INCHES OR LESS BUT GREATER THAN 8 INCHES, AND PLUS OR MINUS 1 1/4 INCH FOR "d" GREATER THAN 24 INCHES.

STRUCTURAL AND MISCELLANEOUS STEEL:

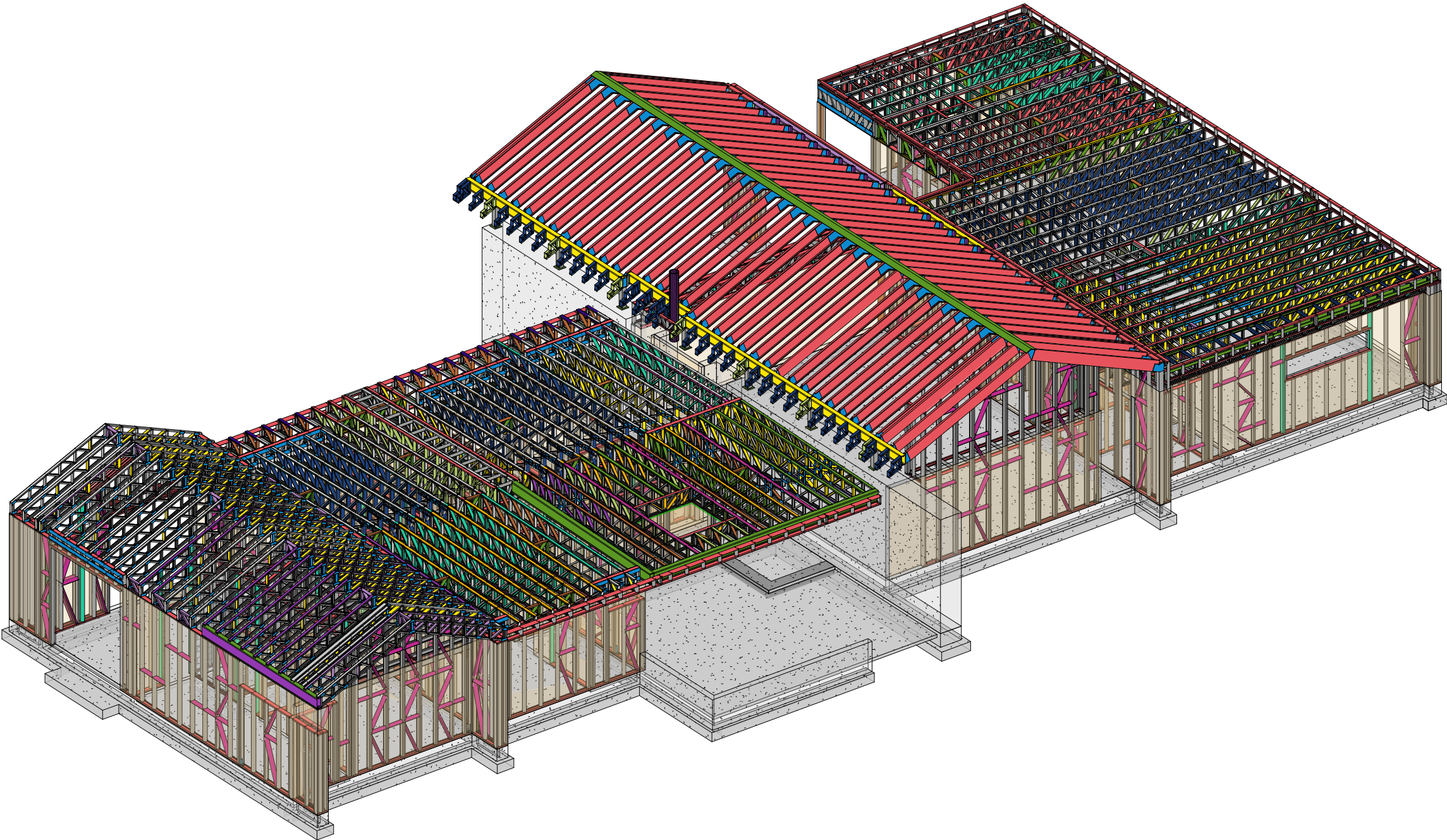
1. MATERIAL PROPERTIES:  
a. ALL PLATES, ANGLES, AND CHANNELS TO BE ASTM A 36 UNLESS NOTED OTHERWISE. ALL PLATES IN MOMENT CONNECTIONS, UNO, SHALL BE 50 KSI STEEL.  
b. ALL W SHAPES TO BE ASTM A 992 (Fy = 50 KSI).  
c. PIPE COLUMNS TO BE ASTM A 501, Fy = 36 KSI OR ASTM A501 (Fy = 36 KSI) OR ASTM A 53, TYPE E OR TYPE S, GRADE B, Fy = 35 KSI.  
d. SQUARE OR RECTANGULAR TUBES TO BE ASTM A 500, GRADE B, Fy = 46 KSI.  
e. ALL STEEL TO BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS, LATEST ADOPTION.  
f. ALL STRUCTURAL STEEL SHALL BE FABRICATED IN THE SHOP OF AN APPROVED CITY OF PHOENIX STEEL FABRICATOR OR SPECIAL INSPECTION OF THE FABRICATOR WILL BE REQUIRED.
2. WELDING:  
a. FOR STRUCTURAL STEEL TO BE IN ACCORDANCE WITH A.W.S. REQUIREMENTS FOR E70XX ELECTRODES.  
3. BOLTS:  
a. ALL BOLTS TO BE 3/4" DIAMETER ASTM A 325N UNLESS NOTED OTHERWISE.  
b. ANCHOR BOLTS SHALL BE ASTM A 307 OR A 36.  
c. HEADED STUD SHEAR CONNECTORS: TO BE ASTM A 108.  
5. DEFORMED BAR ANCHORS: TO BE ASTM A 496.

6. STEEL JOIST GIRDERS:  
a. TO BE OPEN WEB "G" SERIES, DESIGNED, DETAILED AND FABRICATED BY THE JOIST MANUFACTURER FOR THE LOADS INDICATED ON THE PLANS IN ACCORDANCE WITH S.J.I. SPECIFICATIONS AND THE APPLICABLE IBC STANDARDS.  
b. PROVIDE BOTTOM CHORD BRACES AS REQUIRED BY JOIST MANUFACTURER AND SJI SPECIFICATIONS.  
c. MECHANICAL UNIT WEIGHTS SHOWN ON PLANS ARE NOT INCLUDED IN GIRDER DESIGNATIONS AND ARE TO BE ADDED TO THE GIRDER DESIGNS.  
7. METAL ROOF DECK: (SELECT AS APPROPRIATE)  
a. TO BE [PAINTED] (GALVANIZED)  
[PHOSPHATIZED/PAINTED] AND OF THE TYPE AND GAUGES CALLED FOR ON THE DRAWINGS, MANUFACTURED AND ERECTED PER S.D.I. AND IN ACCORDANCE WITH ICC ESR #2078P.  
b. STEEL DECK INSTITUTE SPECIFICATIONS AND RECOMMENDATIONS APPLY EXCEPT AS OTHERWISE NOTED. DECK SHALL BE MINIMUM [22] GAUGE, TYPE WR, 1 1/2" DEEP, 30" OR 36" WIDE, [PAINTED], MINIMUM ALLOWABLE DIAPHRAGM SHEAR PER ICC ESR REPORT SHALL BE [200] PLF. ERECT IN ACCORDANCE WITH THE REPORT TO MEET THE REQUIRED SHEAR SPECIFIED ABOVE, EXCEPT THAT IN NO CASE SHALL THE ATTACHMENT BE LESS THAN THAT SHOWN.  
c. ALL METAL DECK IS TO BE WELDED WITH E6022 ELECTRODES UNLESS OTHER ELECTRODES ARE SPECIFICALLY APPROVED BY THIS ENGINEER. (this won't fly in California - call out E7018 rods instead) ALL WELDERS ARE TO HAVE "LIGHT-GAGE" CERTIFICATION PER A.W.S. REQUIREMENTS

MISCELLANEOUS:

1. EXPANSION AND SCREW ANCHORS: USE STUD TYPE EXPANSION ANCHORS WITH A SINGLE PIECE WEDGE. CONTRACTOR SHALL SUBMIT MANUFACTURERS SIZE AND STRENGTH DATE PRIOR TO USE.  
2. CONCRETE ANCHORS: ANCHORS SHALL HAVE AN ICC APPROVAL AND INCLUDE HILTI KWIK BOLT TZ (ESR 1917) AND SIMPSON TITEN HD (ESR 2713) OR APPROVED EQUAL.  
3. EPOXY SET ANCHORS IN CONCRETE: ANCHORS SHALL HAVE ICC APPROVAL AND INCLUDE HILTI HIT-RE500 SD (ESR 3814) OR APPROVED EQUAL.  
4. EPOXY SET ANCHORS IN MASONRY: ANCHORS SHALL HAVE ICC APPROVAL AND INCLUDE HILTI HIT HY270 (ESR 4143) OR APPROVED EQUAL.

**NOTE TO CONTRACTOR REGARDING PRICING/BIDDING OF PERMIT SUBMITTAL DRAWINGS:**  
1. THESE DRAWINGS HAVE BEE PREPARED FOR PERMIT SUBMITTAL AND ARE NOT TO BE CONSIDERED 100% CONSTRUCTION DOCUMENTS UNTIL PLANS REVIEW HAS BEEN COMPLETED AND FINAL BUILDING PERMIT HAS BEEN ISSUED.  
2. IF THESE DOCUMENTS ARE TO BE USED FOR PRICING, BID, BUDGET – THE CONTRACTOR SHALL PROVIDED IN THE PROJECT BUDGET AN ALLOWANCE FOR POTENTIAL CHANGES BETWEEN THE PERMIT SUBMITTAL DRAWINGS AND THE FINAL BUILDING PERMIT SETS.  
3. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR CHANGE ORDERS AND COSTS INCURRED DUE TO BIDDING OR STEEL ORDERS FROM THESE DRAWINGS. CONTACT STRUCTURAL ENGINEER FOR CLARIFICATION IF THE SCOPE AND QUANTITY FOR ALLOWANCE IS NOT CLEAR.  
1. SPECIAL INSPECTION: SPECIAL INSPECTION IS REQUIRED IN ACCORDANCE WITH I.B.C. SECTION 1701 FOR THE FOLLOWING ITEMS.  
1. CONCRETE CONSTRUCTION  
2. STEEL CONSTRUCTION  
3. SPECIAL CASES: EPOXY SET POST INSTALLED ANCHORS  
4. SPECIAL CASES: EXPANSION TYPE POST INSTALLED ANCHORS  
5. SOILS BY GEOTECHNICAL ENGINEER



DESIGN CRITERIA:

- A. BUILDING CODE:  
1. CITY OF PHOENIX, 2018 I.B.C.W/ AMENDMENTS  
B. LOADINGS:  
1. ROOF LIVE LOAD = 20 PSF (ON HORIZONTAL PROJECTION)  
2. ROOF DEAD LOAD = 20 PSF (TYP), 25 PSF AT SOLAR PANEL LOCATIONS (PRESENT OR FUTURE)  
3. WIND LOAD - 115 MPH ZONE (ULT) EXPOSURE C  
4. WIND IMPORTANCE FACTOR, Iw = 1.0  
5. INTERNAL PRESSURE COEFFICIENT (GCpi) = 0.18  
6. WIND VELOCITY PRESSURE, qz=30.1 PSF (ULT) AT H=25 FT FOR COMPONENTS AND CLADDING  
7. SEISMIC OCCUPANCY CATEGORY - II  
8. SEISMIC IMPORTANCE FACTOR = 1.0  
9. DESIGN CATEGORY = B  
10. SITE CLASS = D  
11. SEISMIC SDS = 0.192, SD1 = 0.094  
12. R = 6.5 (LIGHT WOOD FRAMED SHEAR WALLS)  
13. ANALYSIS PROCEDURE = SIMPLIFIED METHOD  
14. Cs = 0.031 (ULTIMATE), BASE SHEAR = 7.50 KIPS (ULT)  
C. SOIL BEARING ALLOWABLE:  
1. PER SOILS INVESTIGATION BY VANN ENGINEERING (PROJECT 27683) ALL FOOTINGS ARE TO BE FOUNDED AT NOT LESS THAN 1'-6" BELOW LOWEST ADJACENT FINISH FLOOR OR FINISH GRADE ONTO ENGINEERED FILL PER SOILS INVESTIGATION SUBSOILS HAVING A MINIMUM BEARING CAPACITY OF 1500 PSF FOR TOTAL LOAD.  
2. ALL FOOTING EXCAVATIONS ARE TO BE REVIEWED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE WHO IS FAMILIAR WITH THE LOCAL SITE SOILS, TO VERIFY THE SUITABILITY OF THE DESIGN BEARING PRESSURE USED.  
D. FUTURE EXPANSION: THIS PROJECT IS NOT DESIGNED FOR FUTURE EXPANSION.

SHEET LIST			
Sheet Number	Sheet Name	Revision Date	
S0	COVER SHEET	241017	
S0.1	SPECIAL INSPECTIONS	241017	
S1	STRUCTURAL FOUNDATION PLAN	241017	
S1.1	FOUNDATION DETAILS		
S2	WALL FLOOR PLAN	241017	
S3	ROOF FRAMING PLAN	241128	
S4	CEILING FRAMING PLAN		
S5	STRUCTURAL SECTIONS		
S6	STRUCTURAL SECTIONS		
S7	STRUCTURAL SECTIONS		
S7.1	STRUCTURAL SECTIONS		
S8	FRAMING CONNECTION DETAILS		
S8.1	FRAMING CONNECTION DETAILS	241128	

CODE / AUTHORITY:

PHOENIX BUILDING CODES (IBC 2018 WITH AMENDMENTS AND ADDITIONS)  
2018 EDITION OF THE INTERNATIONAL BUILDING CODE WITH THE RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS (IRC 2018 WITH AMENDMENTS AND ADDITIONS)  
2018 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE  
ASCE 7-16  
STEEL DESIGN: AISC 360-16: LRFD SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS  
COLD-FORMED STEEL: AISI S100-16W  
SEISMIC AISC 341-16 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS  
CONCRETE: REINFORCED CONCRETE DESIGN HANDBOOK (ACI)  
ULTIMATE STRENGTH DESIGN HANDBOOK (ACI)

SHEET NUMBER:

S0

SHEET NAME:

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PROJECT NUMBER

24-111



# SPECIAL INSPECTIONS

## NOTES:

PER IBC 2018 SPECIAL INSPECTIONS, SEE INTERNATONAL BUILDIG CODE, CHAPTER 17.

VERIFICATION & INSPECTION	C	P	NOTES
1705.2 - STRUCTURAL STEEL CONSTRUCTION (AISC 360 AND ASIC 341)			
5. STRUCTURAL STEEL WELDING:			
C. INSPECTION TASKS AFTER WELDING (INSPECT FOR EACH WELDED JOINT OR MEMBER, THE QA TASKS LISTED IN AISC 360, TABLE N5.4-3)		X	
1705.3 - CONCRETE CONSTRUCTION			
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS AND PLACEMENT.		X	ACI 318: 3.5
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5B.			AWS D1.4 ACI 318: 3.5.2
3. INSPECT BOLTS AND ANCHOR PLATES WITH ATTACHED HEADED STUDS, OR REBAR TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED.	X		ACI 318: 17.8.2
4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.		X	ACI 318: 17.8.2.4 ACI 318: 17.8.2
5. VERIFYING USE OF REQUIRED DESIGN MIX		X	ACI 318: CH. 19, 26.4.3, 26.4.4
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE ASTM C 172 SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		ASTM C 172; ASTM C 31; ACI 318: 26.4.5, 26.12;
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		ACI 318: 26.4.5
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	ACI 318: 5.11-5.13
1705.4 - MASONRY CONSTRUCTION			
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.		X	TMS 602/ACI 530.1/ASCE ART. 1.5
2. VERIFICATION OF FM AND FAAC PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE.		X	TMS 602/ACI 530.1/ASCE ART. 1.4B
3. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF-CONSOLIDATING GROUT.		X	TMS 602/ACI 530.1/ASCE ART. 1.5B.1.B.3
4. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
A. PROPORTIONS OF SITE-PREPARED MORTAR.		X	TMS 602/ACI 530.1/ASCE ART. 2.6A
B. CONSTRUCTION OF MORTAR JOINTS.		X	TMS 602/ACI 530.1/ASCE ART. 3.3B
5. DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:			
A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.		X	TMS 602/ACI 530.1/ASCE ART. 3.3F
B. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.		X	TMS 402/ACI 530/ASCE 5 SEC. 1.2.2(E), 1.16.1
C. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.		X	TMS 402/ACI 530/ASCE 5 SEC. 1.15 TMS 602/ACI 530.1/ASCE ART. 2.4, 3.4
D. WELDING OF REINFORCING BARS.	X		TMS 402/ACI 530/ASCE 5 SEC. 2.1.9.7.2, 3.3.3.4(B)
E. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).		X	IBC SEC. 2104.3, 2104.4 TMS 602/ACI 530.1/ASCE ART. 1.8C,1.8D
6. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
A. GROUT SPACE IS CLEAN.		X	TMS 602/ACI 530.1/ASCE ART. 3.2D
D. CONSTRUCTION OF MORTAR JOINTS.		X	TMS 602/ACI 530.1/ASCE ART. 3.3B
7. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE:	X		TMS 602/ACI 530.1/ASCE ART. 3.5
8. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	X		IBC SEC. 2105.2.2, 2105.3 TMS 602/ACI 530.1/ASCE ART. 1.4
1705.6 - SOILS			
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIRED BEARING CAPACITY		X	
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	
4. VERIFY USE OF PROPER MATERIALS, DENSITIES, AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	

1705.12.2 - REQUIRED VERIFICATION AND INSPECTION FOR WIND RESISTANCE			
1. INSPECT WELDING OPERATIONS OF ELEMENTS OF THE MAIN WIND FORCE-RESISTING SYSTEM		X	IBC 1705.12.2
2. INSPECT SCREW ATTACHMENT, BOLTING, ANCHORING, AND OTHER FASTENING OF ELEMENTS OF THE MAIN WIND FORCE-RESISTING SYSTEM, INCLUDING SHEAR WALLS, DIAPHRAGMS, COLLECTORS (DRAG STRUTS), BRACES, AND HOLD-DOWNS		X	IBC 1705.12.2 INSPECTION OF SHEAR WALLS AND DIAPHRAGMS WITH FASTENERS SPACED GREATER THAN 4' OC IS NOT REQUIRED
1705.13.3 - REQUIRED VERIFICATION AND INSPECTION FOR SEISMIC RESISTANCE			
1. INSPECT WELDING OPERATIONS OF ELEMENTS OF THE MAIN SEISMIC FORCE-RESISTING SYSTEM		X	IBC 1705.13.3
2. INSPECT SCREW ATTACHMENT, BOLTING, ANCHORING, AND OTHER FASTENING OF ELEMENTS OF THE MAIN SEISMIC FORCE-RESISTING SYSTEM, INCLUDING SHEAR WALLS, DIAPHRAGMS, COLLECTORS (DRAG STRUTS), BRACES, AND HOLD-DOWNS		X	IBC 1705.13.3 INSPECTION OF SHEAR WALLS AND DIAPHRAGMS WITH FASTENERS SPACED GREATER THAN 4' OC IS NOT REQUIRED

SCHEDULE OF SPECIAL INSPECTIONS  
COLUMN HEADER NOTATION USED IN TABLE:  
C INDICATES CONTINUOUS INSPECTION IS REQUIRED.  
P INDICATES PERIODIC INSPECTIONS ARE REQUIRED. THE NOTES AND/OR CONTRACT DOCUMENTS SHOULD CLARIFY.  
BOX ENTRY NOTATION USED IN TABLE:  
X IS PLACED IN THE APPROPRIATE COLUMN TO DENOTE EITHER "C" CONTINUOUS OR "P" PERIODIC INSPECTIONS.  
-- DENOTES A ONE-TIME ACTIVITIY OR ONE WHOSE FREQUENCY IS DEFINED IN SOME OTHER MANNER  
ADDITIONAL DETAILS REGARDING INSPECTIONS ARE PROVIDED IN THE PROJECT SPECIFICATIONS OR NOTES ON THE DRAWINGS.

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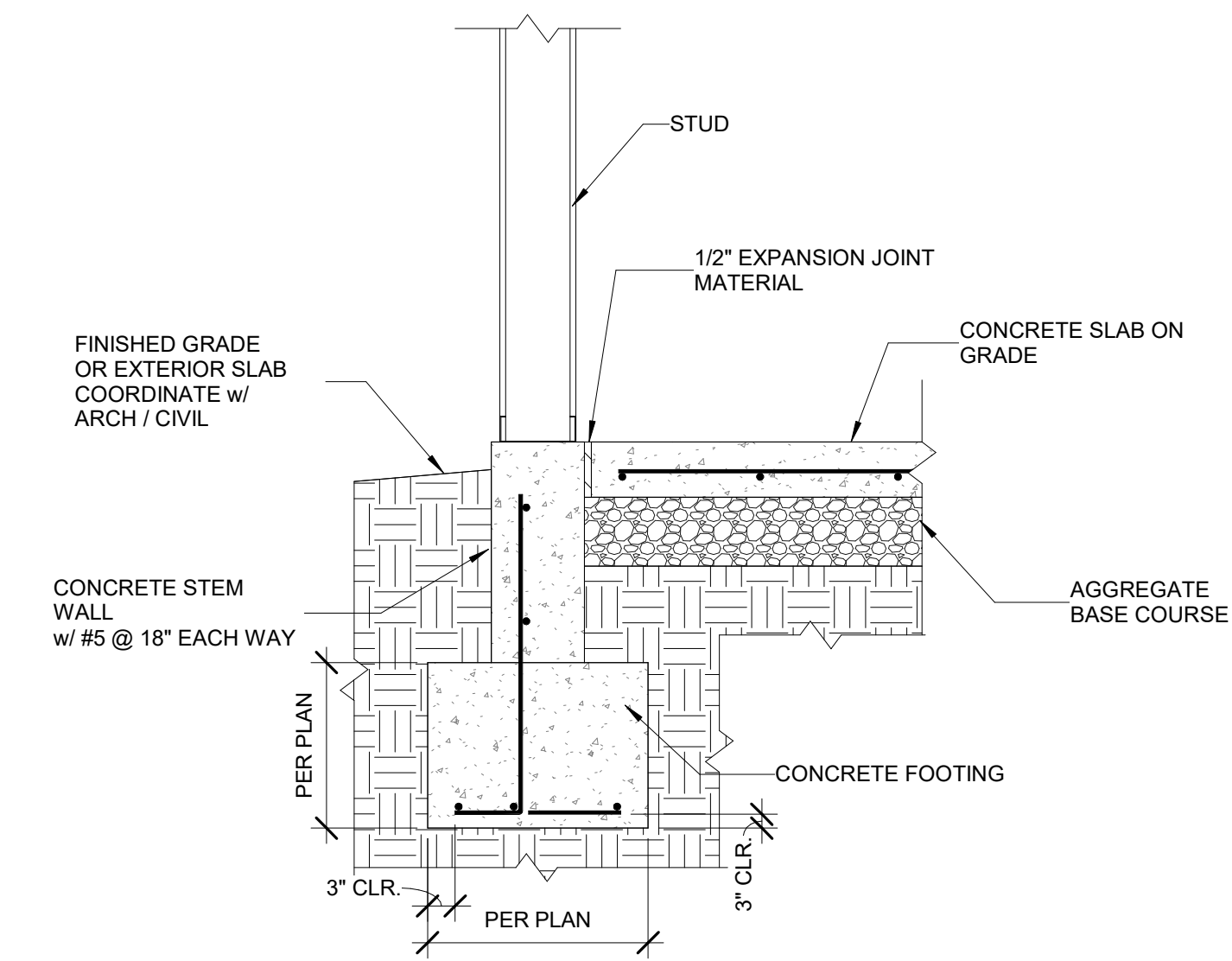
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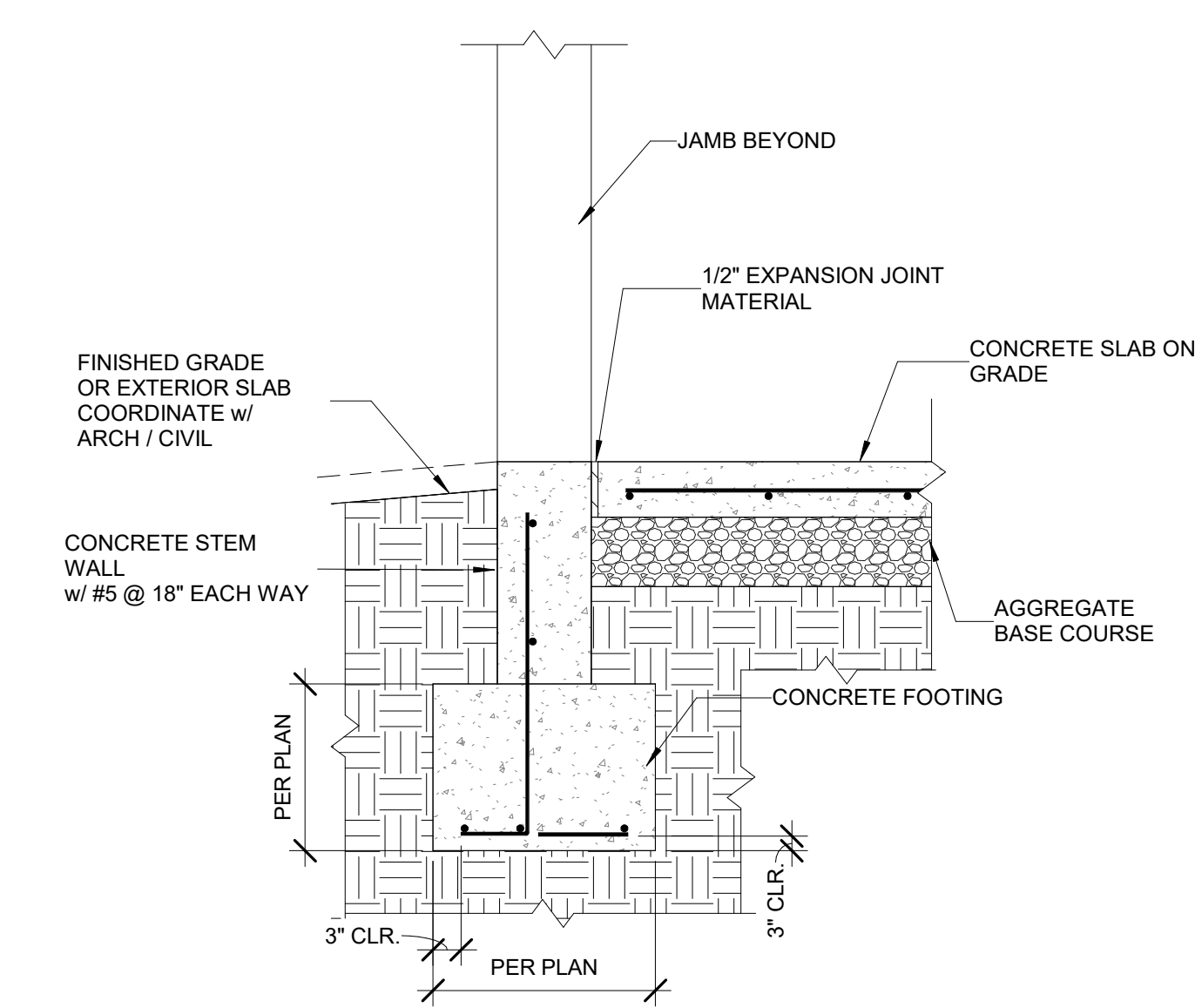
SPECIAL  
INSPECTIONS



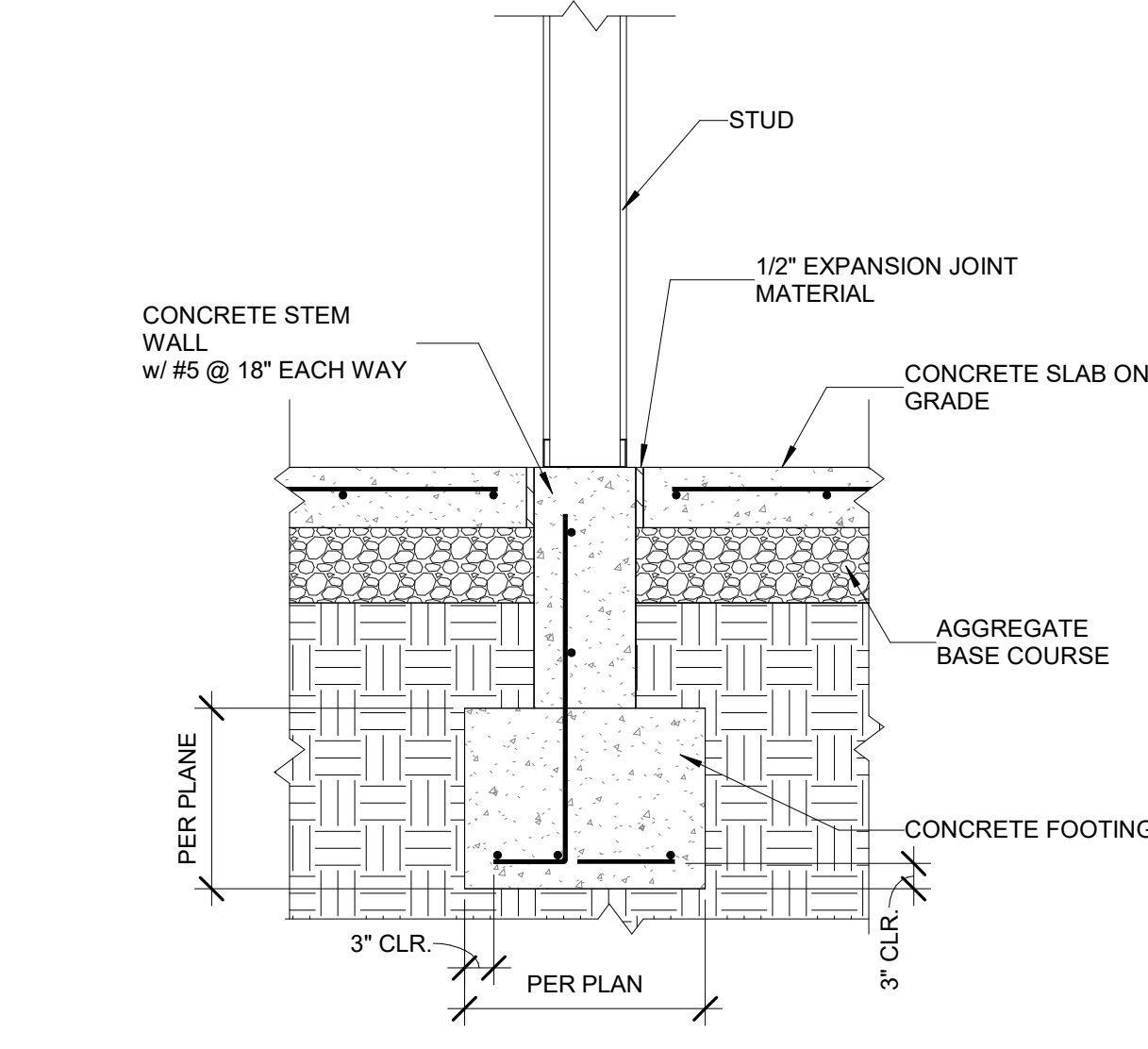
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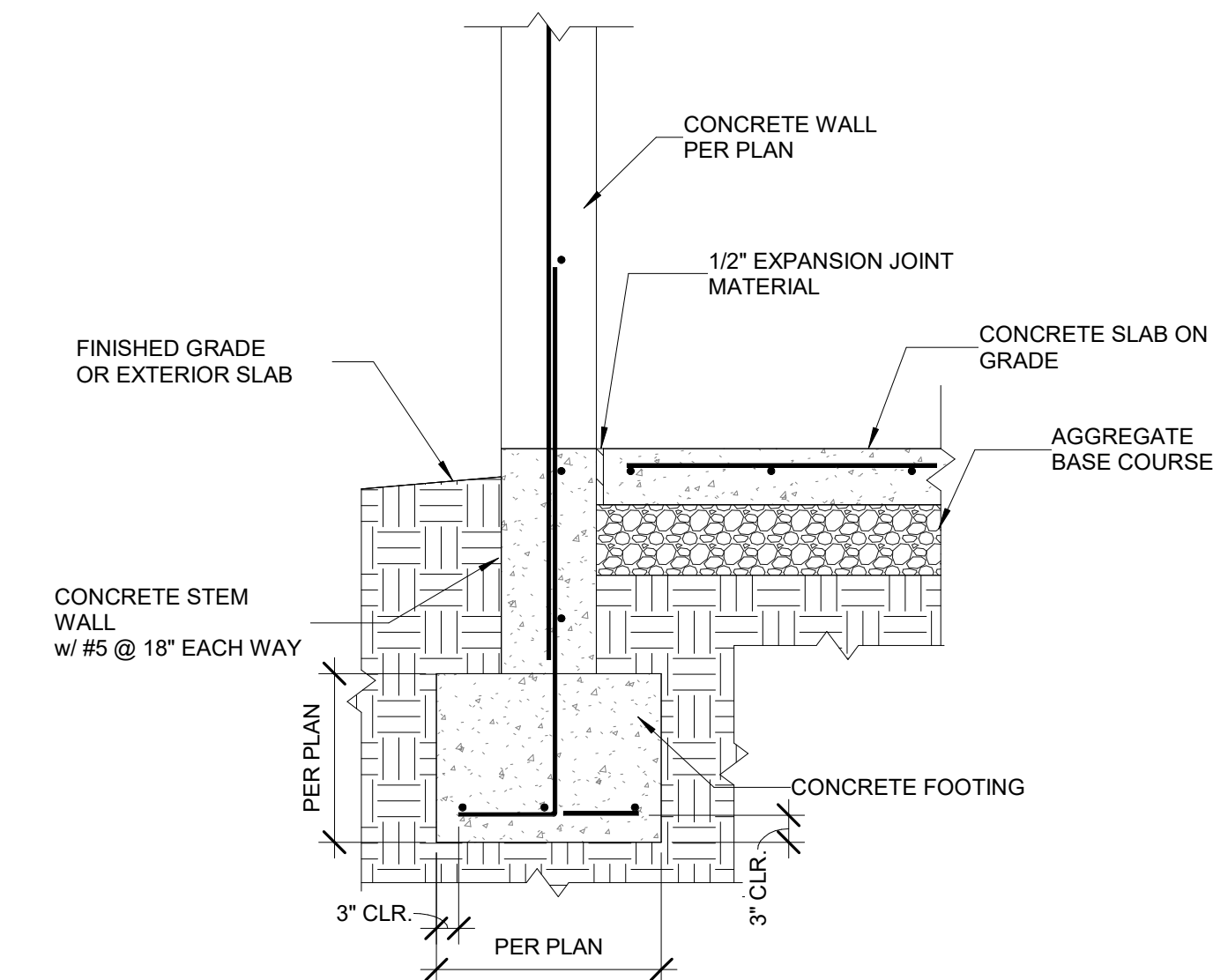
① CONCRETE STEM STUD  
1" = 1'-0"



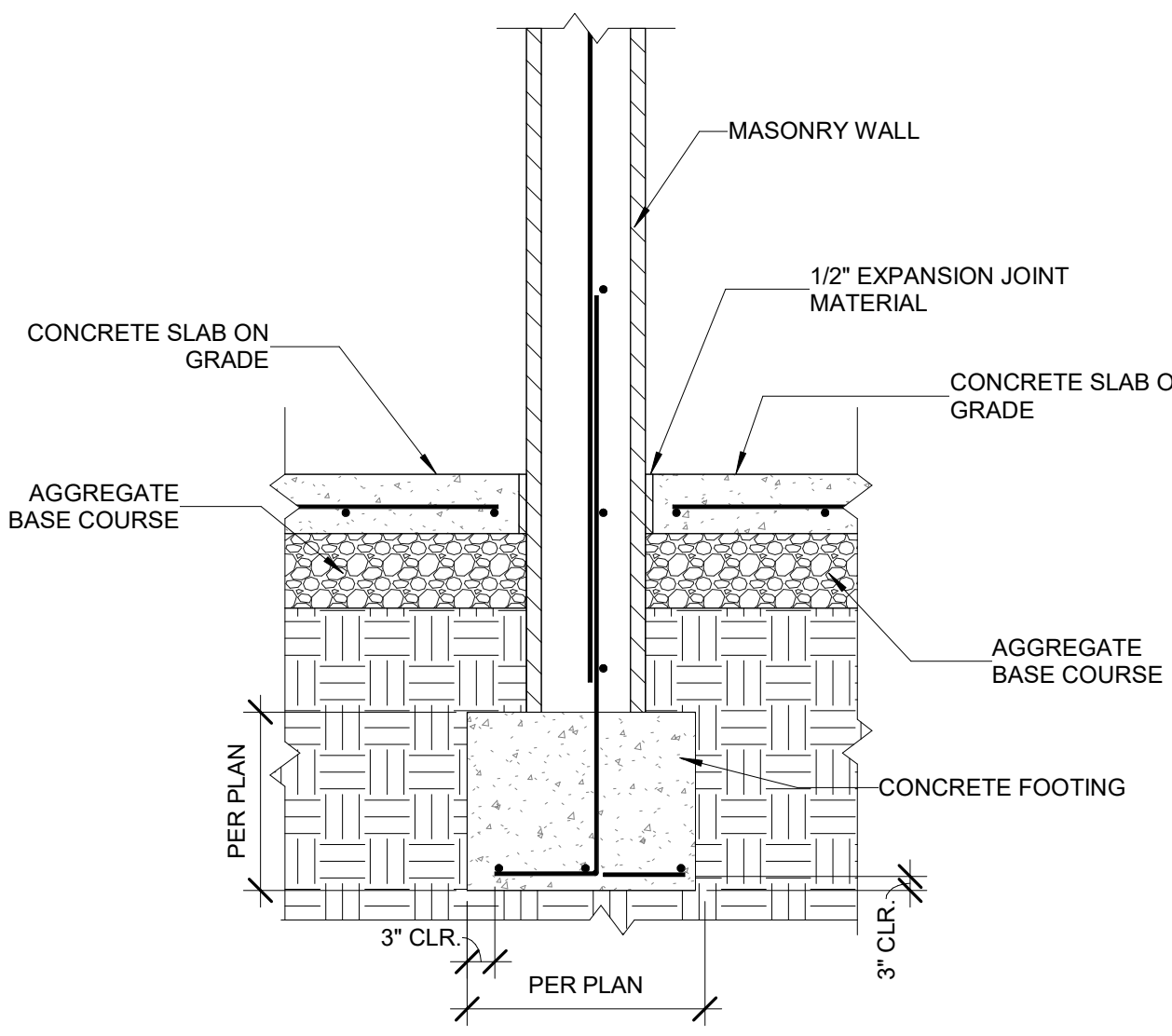
② CONCRETE STEM JUMB  
1" = 1'-0"



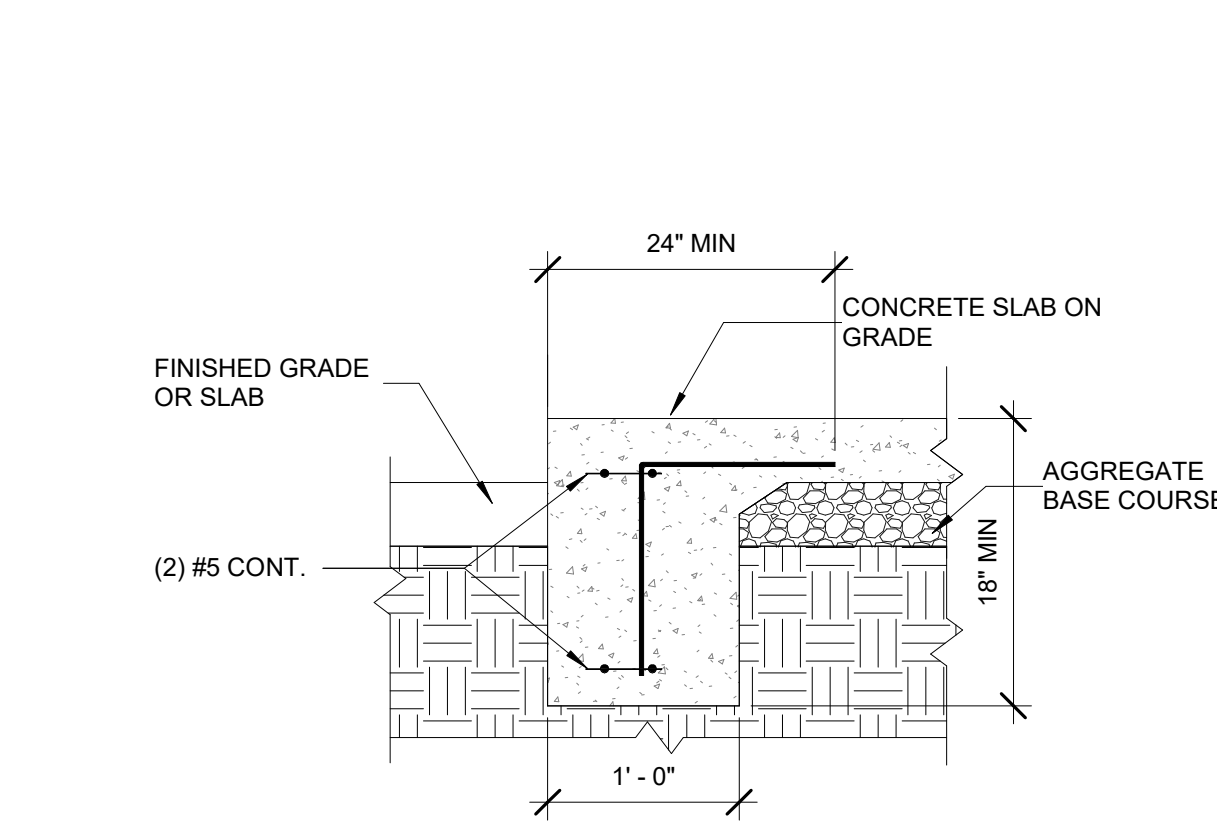
③ SLAB AT INTERIOR STUD WALL  
1" = 1'-0"



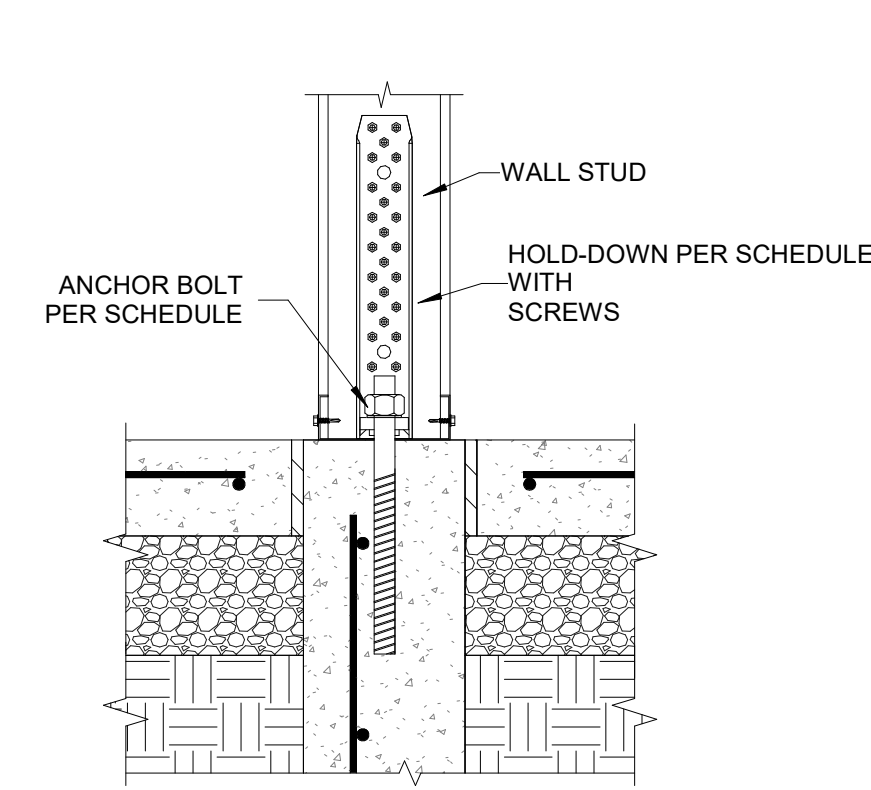
④ CONCRETE WALL EXTERIOR  
1" = 1'-0"



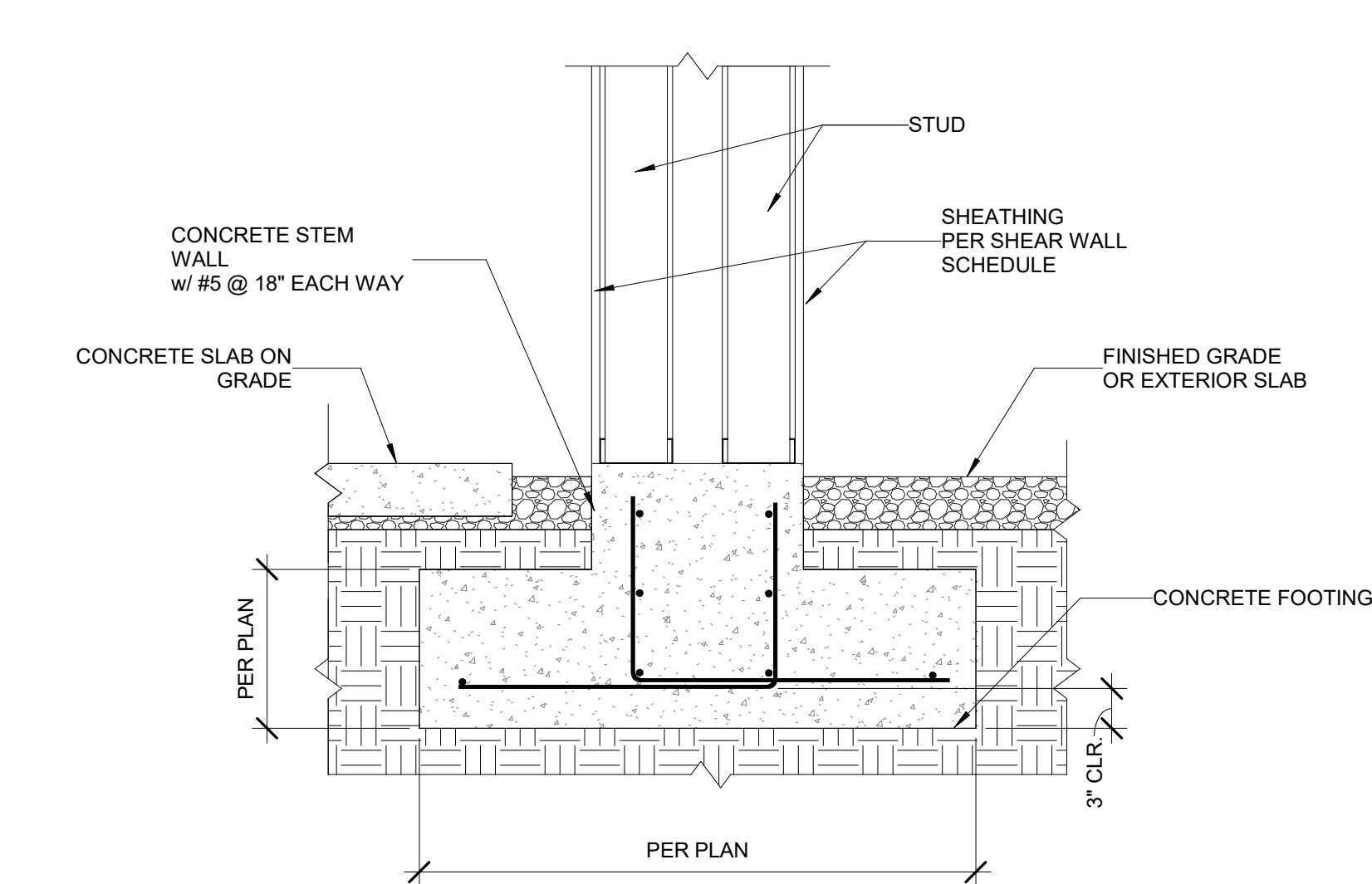
⑤ CMU WALL FOOTING  
1" = 1'-0"



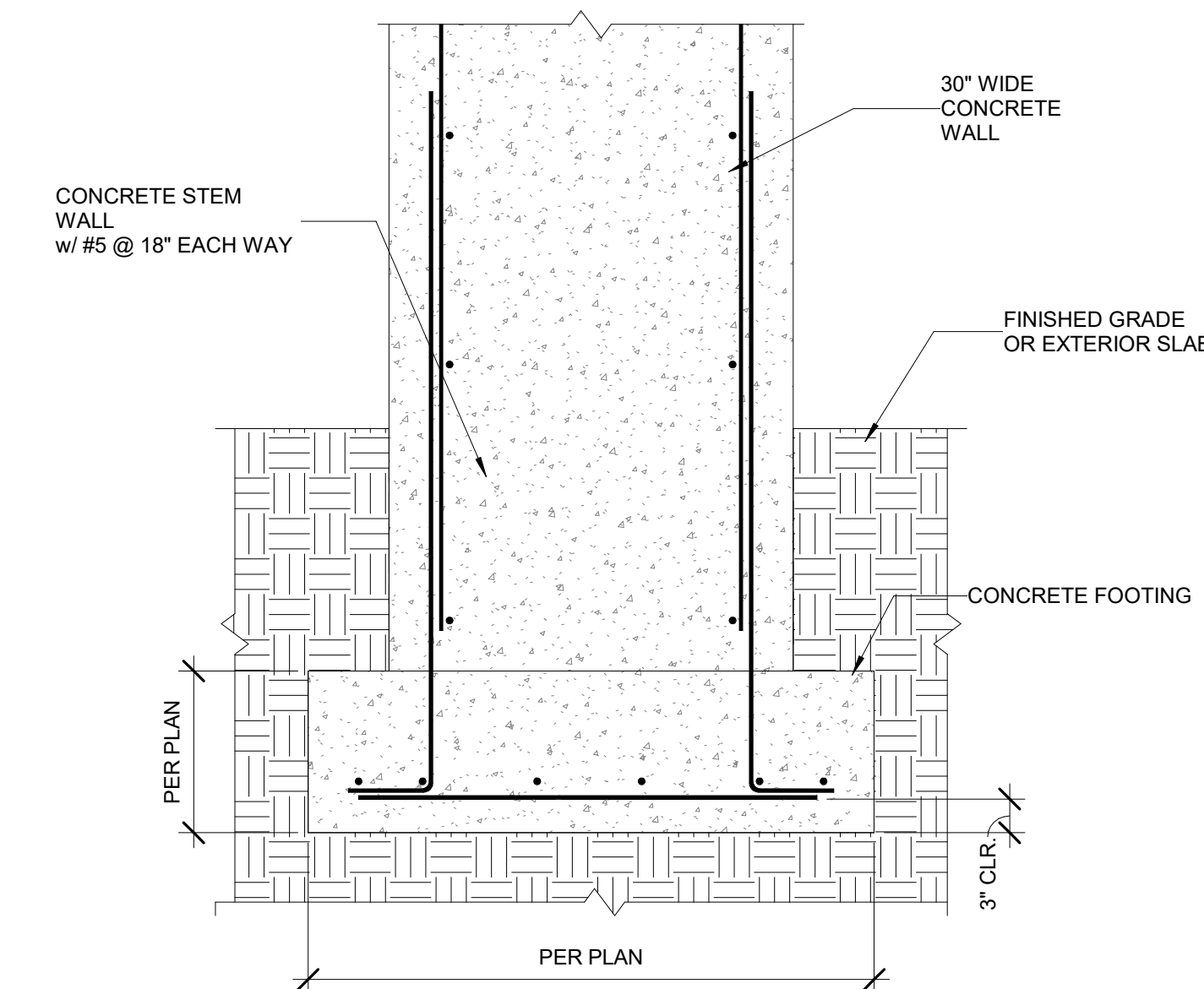
⑥ SLAB EDGE TURNDOWN  
1" = 1'-0"



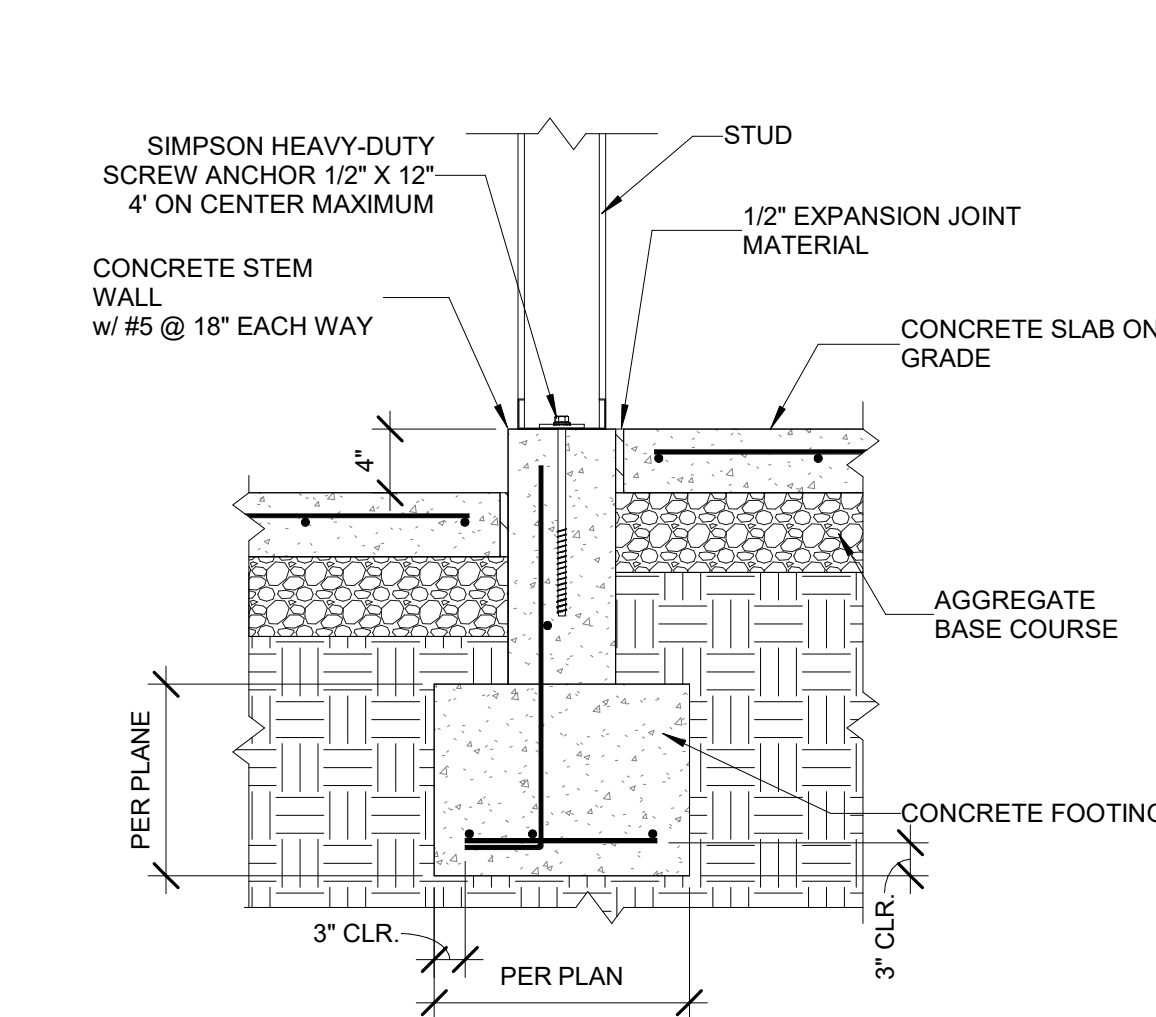
⑦ WALL STUD WITH HOLDOWN CONNECTION DETAIL  
1 1/2" = 1'-0"



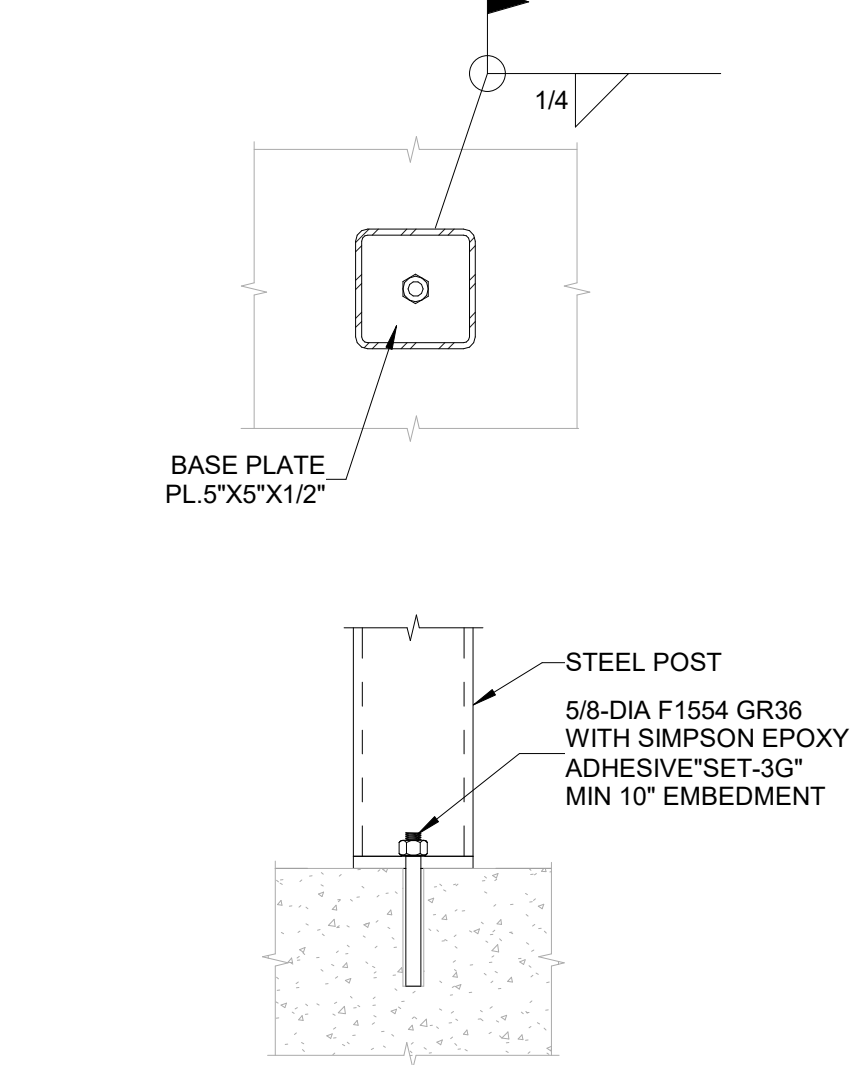
⑧ BASE AT VERT MTL ROOF  
1" = 1'-0"



⑨ CONCRETE WALL  
1" = 1'-0"

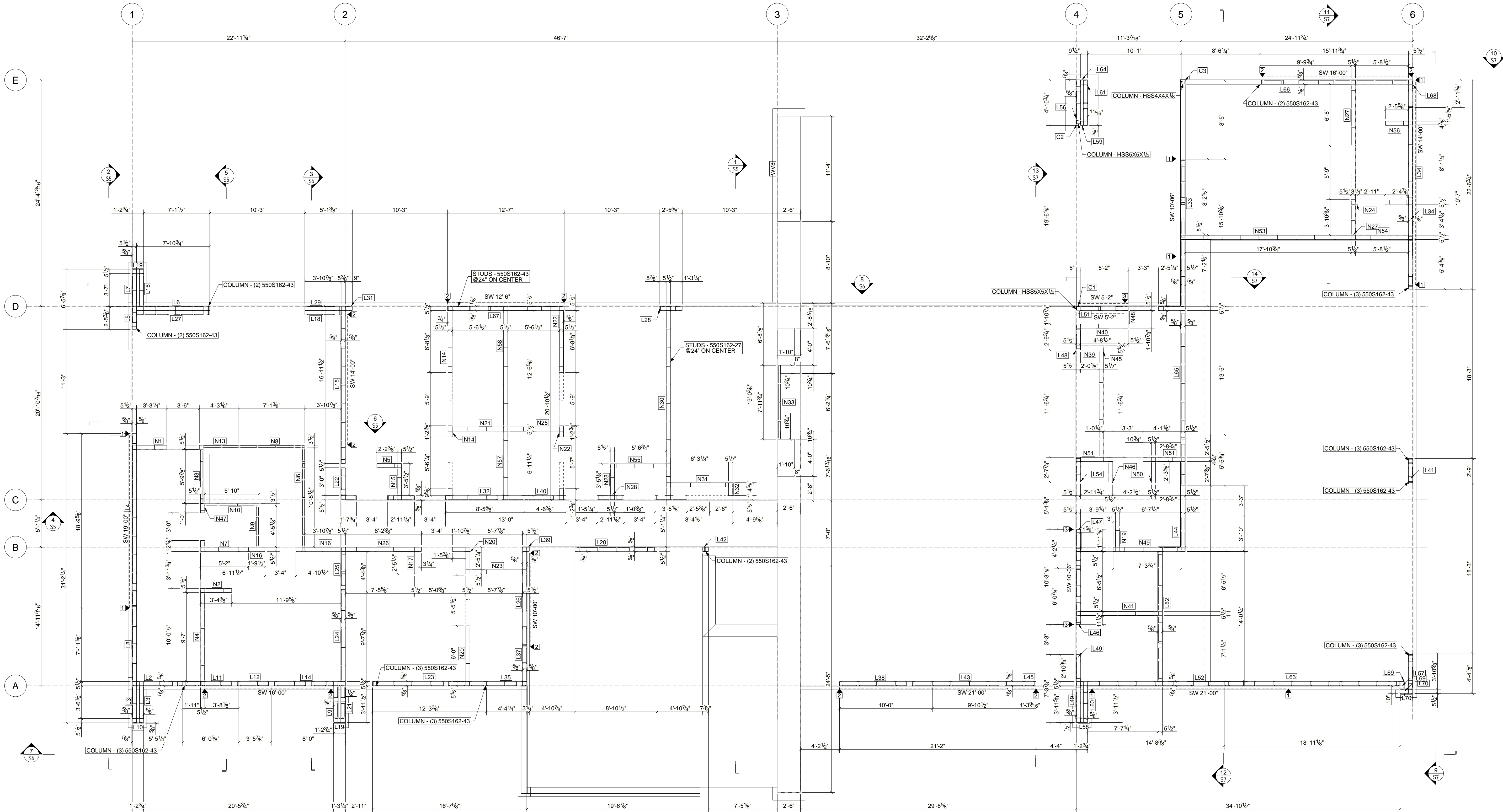


⑩ INTERIOR WALL FOOTING @ SLAB STEP  
1" = 1'-0"



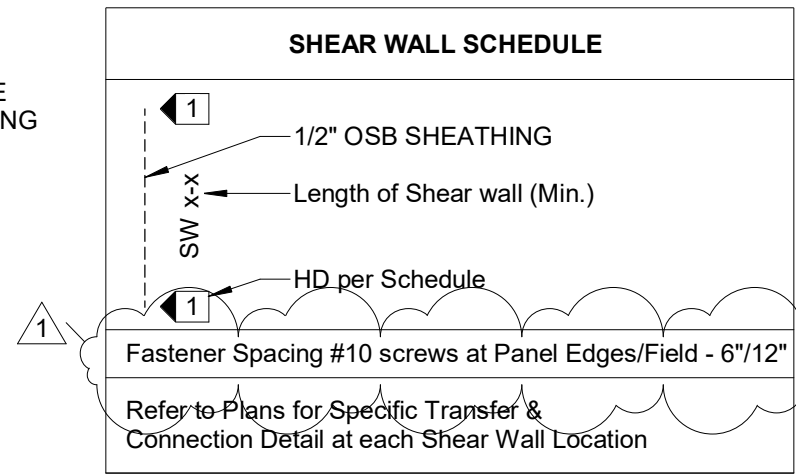
⑪ HSS POST TO FOUNDATION CONNECTION DETAIL  
1 1/2" = 1'-0"





1 WALL FLOOR PLAN  
Scale: 3/16" = 1'-0"

NOTES:  
GRAY LINE REPRESENTS FOUNDATION BELOW  
ANCHOR BOLT WASHERS ARE TO BE 0.229" x 3" x 3" OR LARGER PLATE  
WASHERS AND EXTEND TO WITHIN 0.5" OF THE SHEAR WALL SHEATHING  
TYPICAL EXTERIOR WALLS: STUD - 550S150-43; TRACK - 550S150-43  
TYPICAL INTERIOR WALLS: STUD - 550S150-27; TRACK - 550S150-27  
OR - STUD - 350S150-27; TRACK - 350S150-27



HOLDOWN SCHEDULE			
TYPE	HOLD-DOWN	ANCHOR / EMBEDMENT	QUANTITY
1	SIMPSON S/HDU4	5/8-DIA F1554 GR36 WITH SIMPSON EPOXY ADHESIVE "SET-3G" MIN 4" EMBEDMENT	6
2	SIMPSON S/HDU6	5/8-DIA F1554 GR36 WITH SIMPSON EPOXY ADHESIVE "SET-3G" MIN 6" EMBEDMENT	15
3	SIMPSON S/HDU8	5/8-DIA F1554 GR36 WITH SIMPSON EPOXY ADHESIVE "SET-3G" MIN 10" EMBEDMENT	

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WALL FLOOR  
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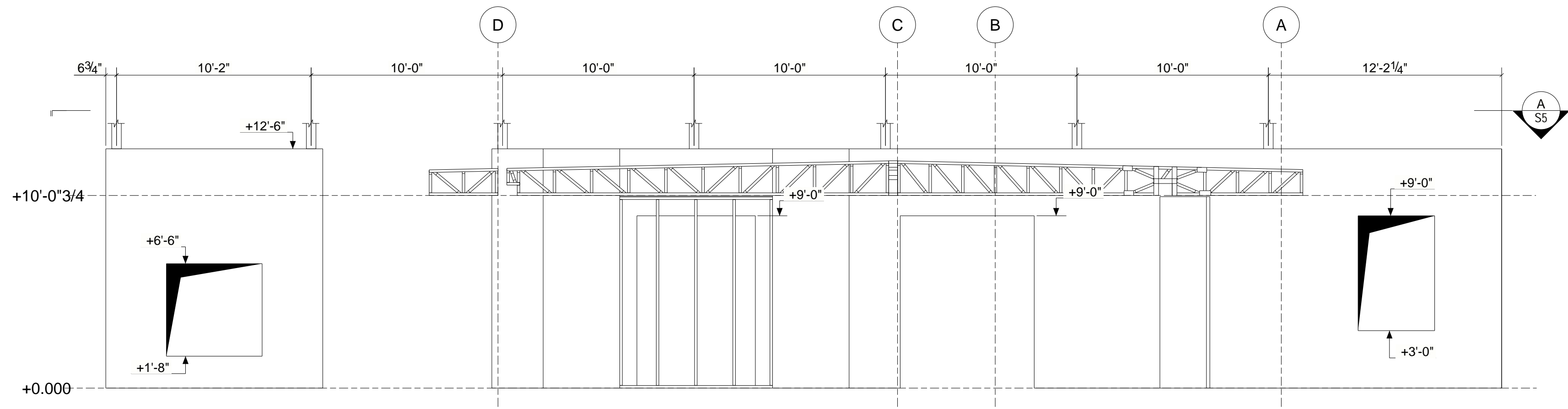




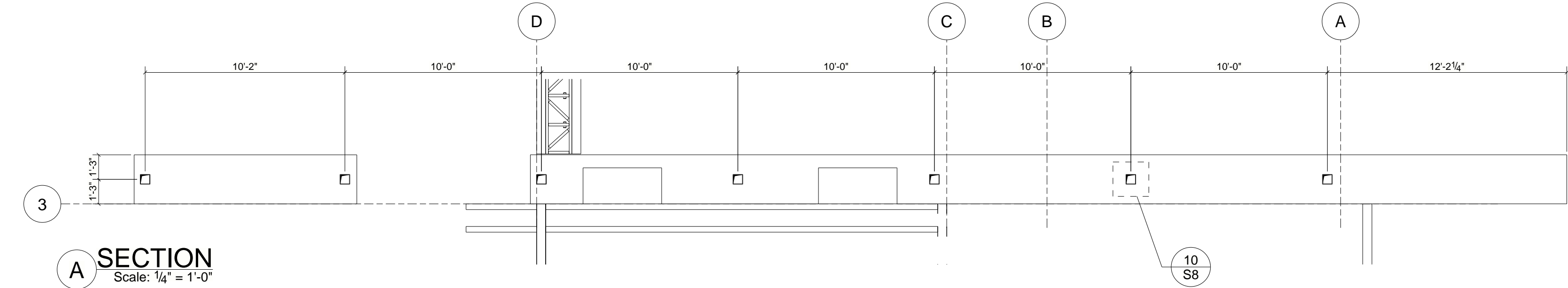


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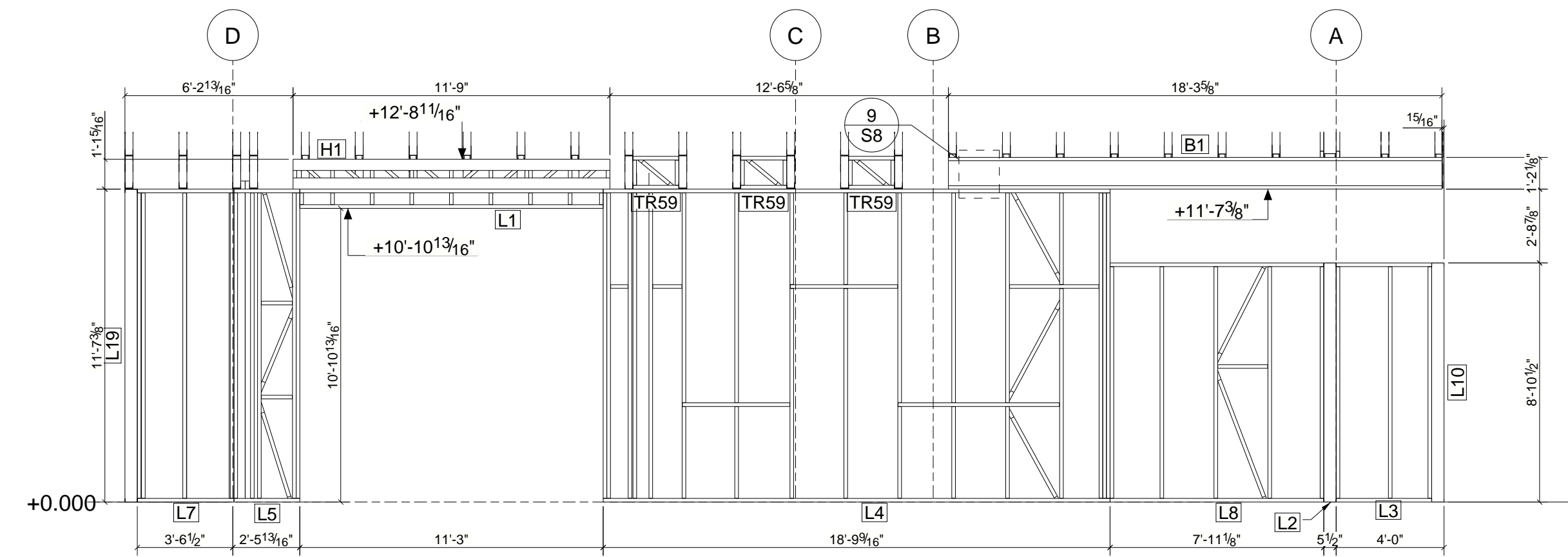




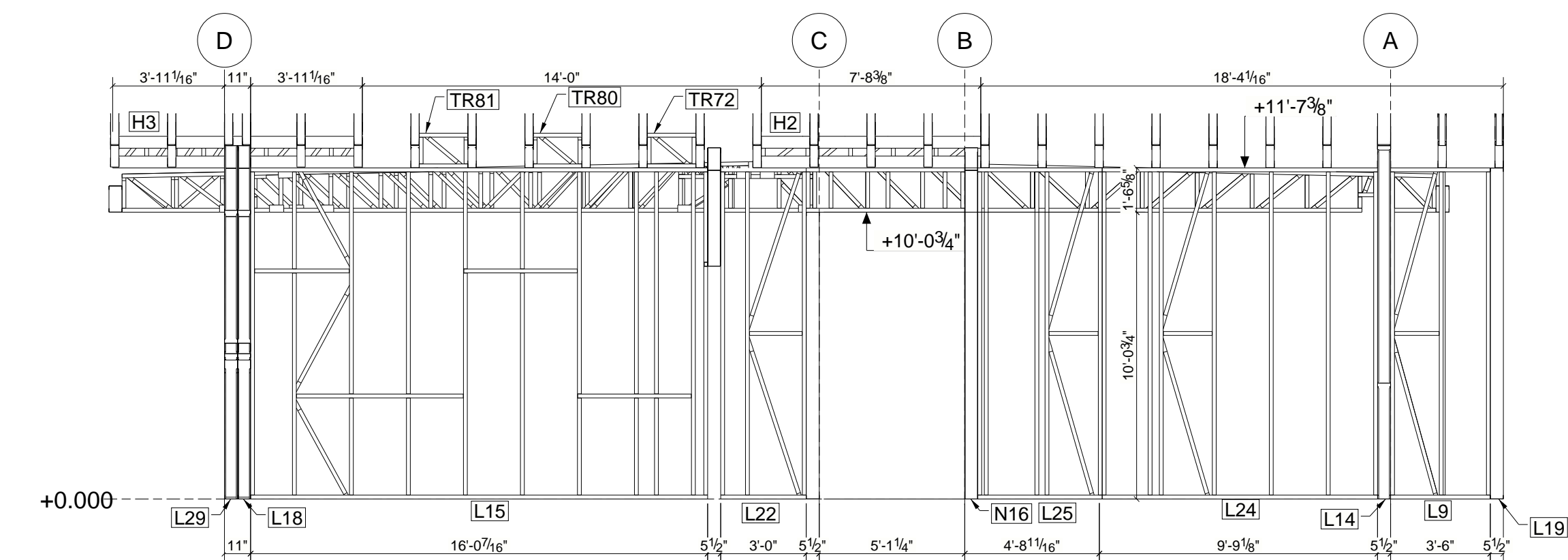
1 SECTION  
Scale: 1/4" = 1'-0"



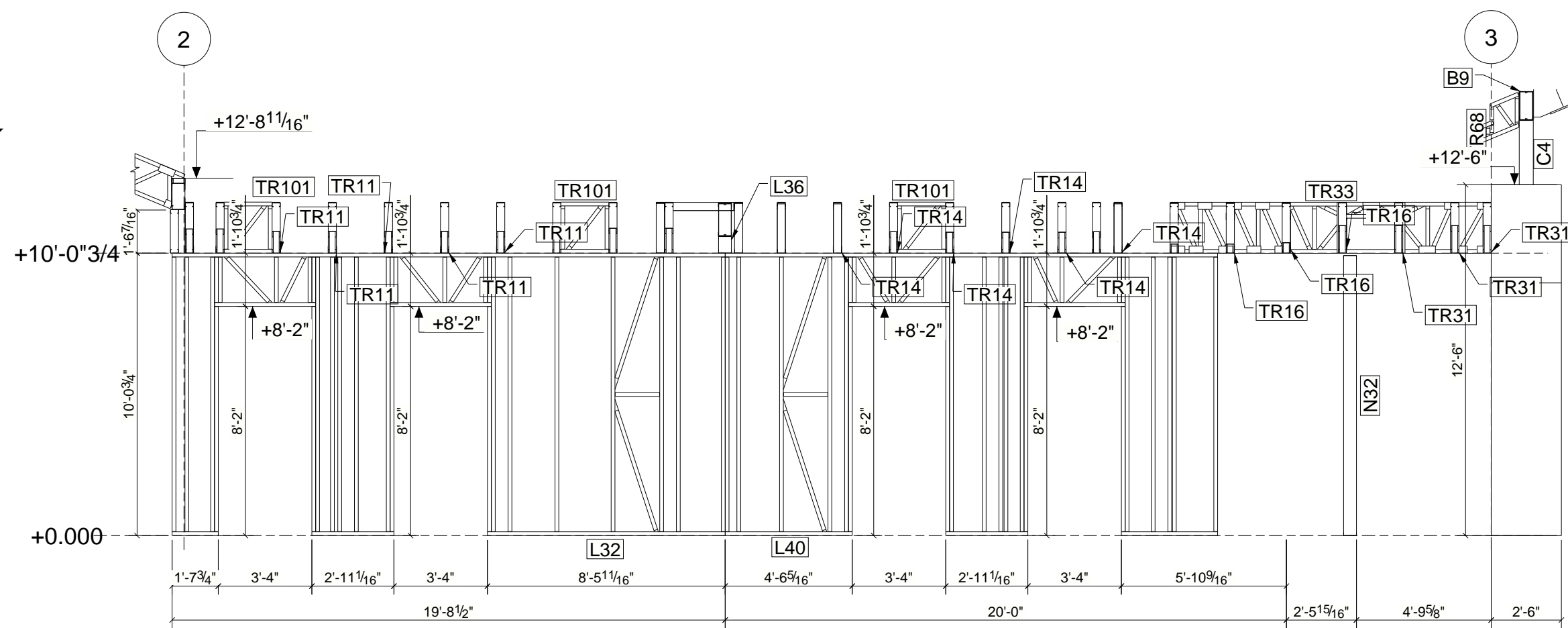
3 SECTION  
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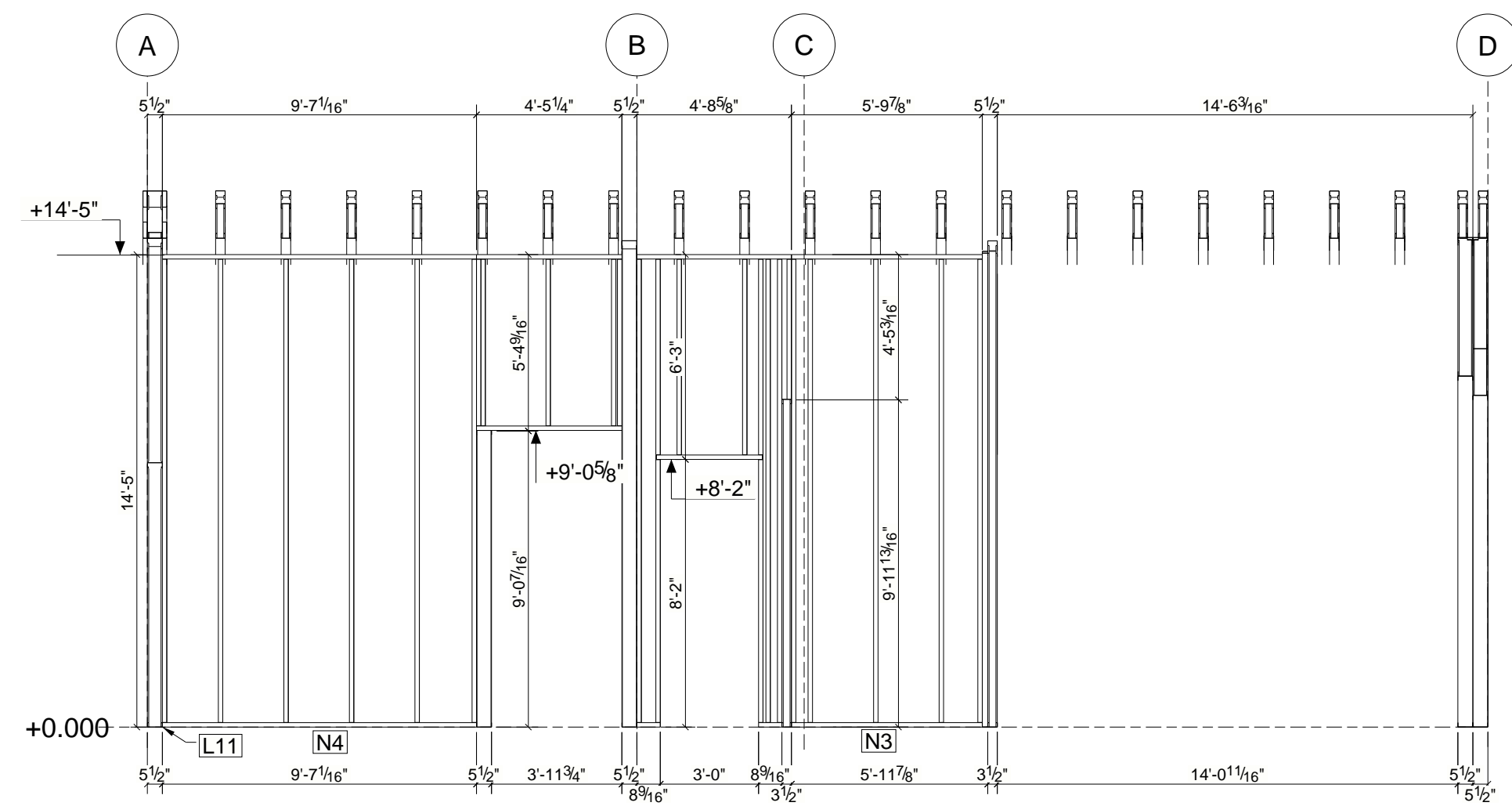
2 SECTION  
Scale: 1/4" = 1'-0"



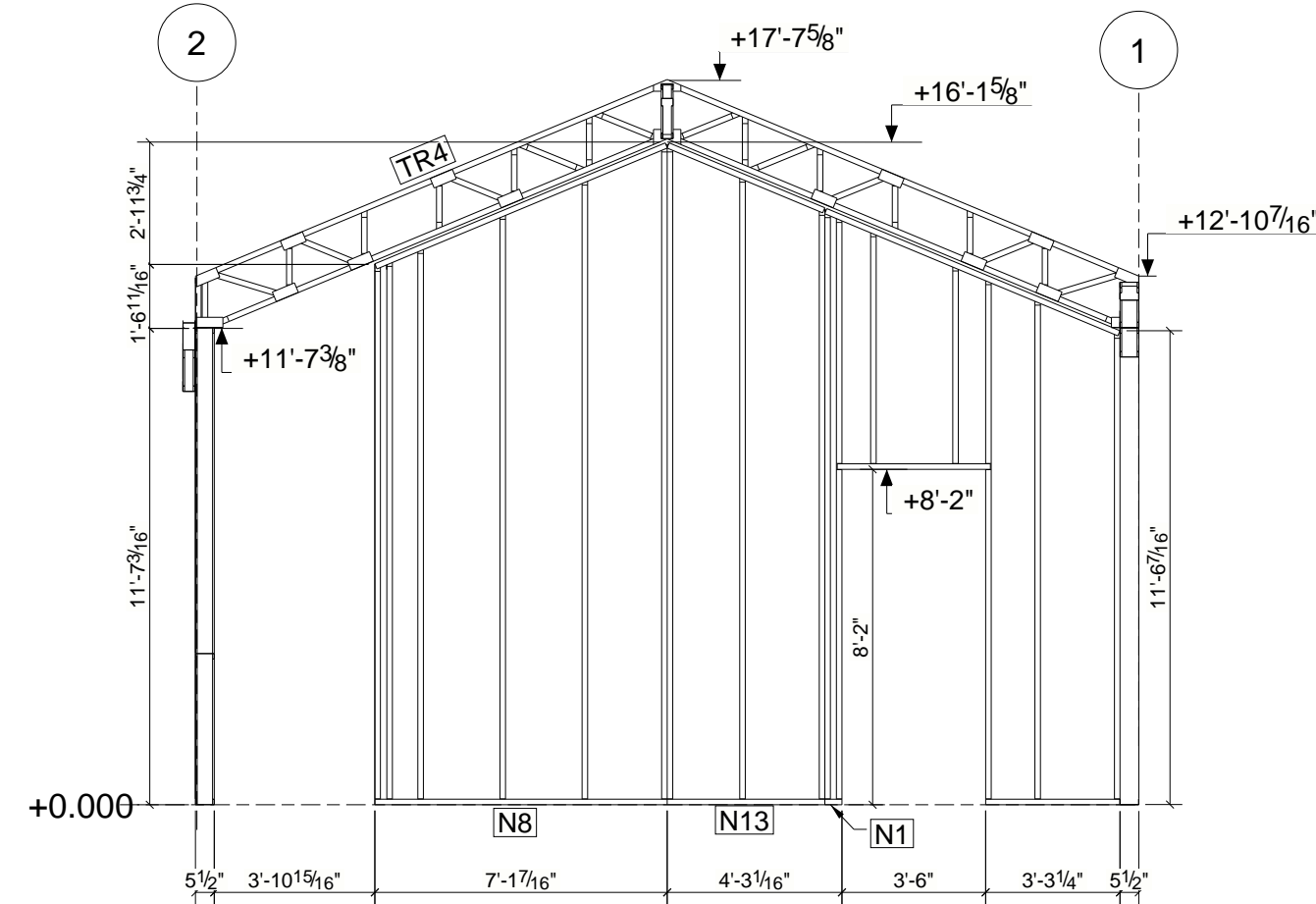
3 SECTION  
Scale: 1/4" = 1'-0"



4 SECTION  
Scale: 1/4" = 1'-0"



5 SECTION  
Scale: 1/4" = 1'-0"



6 SECTION  
Scale: 1/4" = 1'-0"

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S5

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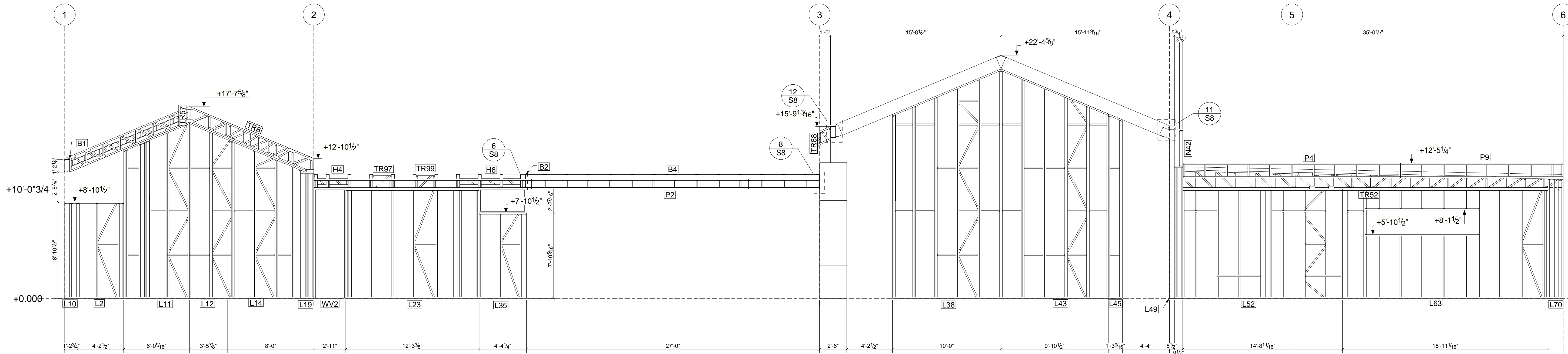
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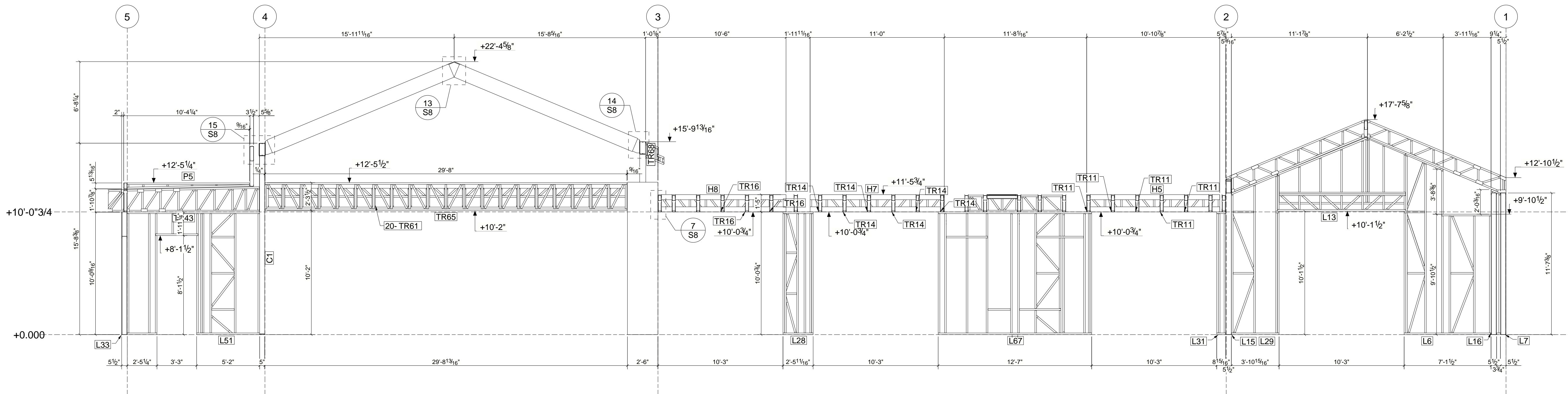
SHEET NAME:

STRUCTURAL  
SECTIONS





7 ELEVATION  
Scale: 1/2" = 1'-0"



8 ELEVATION  
Scale: 1/2" = 1'-0"

SHEET NUMBER:

S6

SHEET NAME:

STRUCTURAL  
SECTIONS

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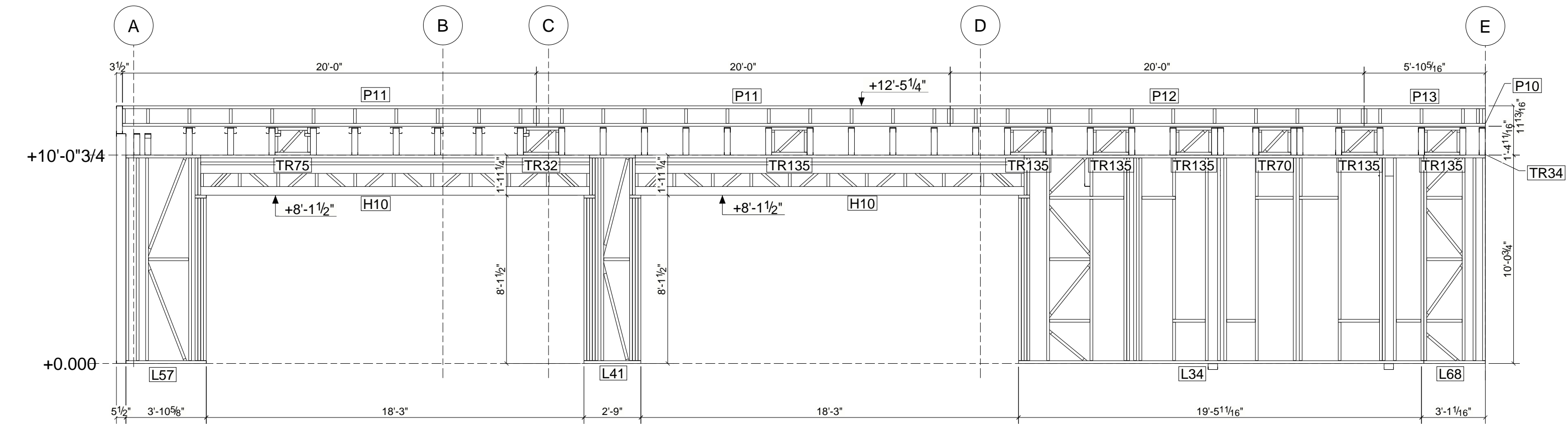
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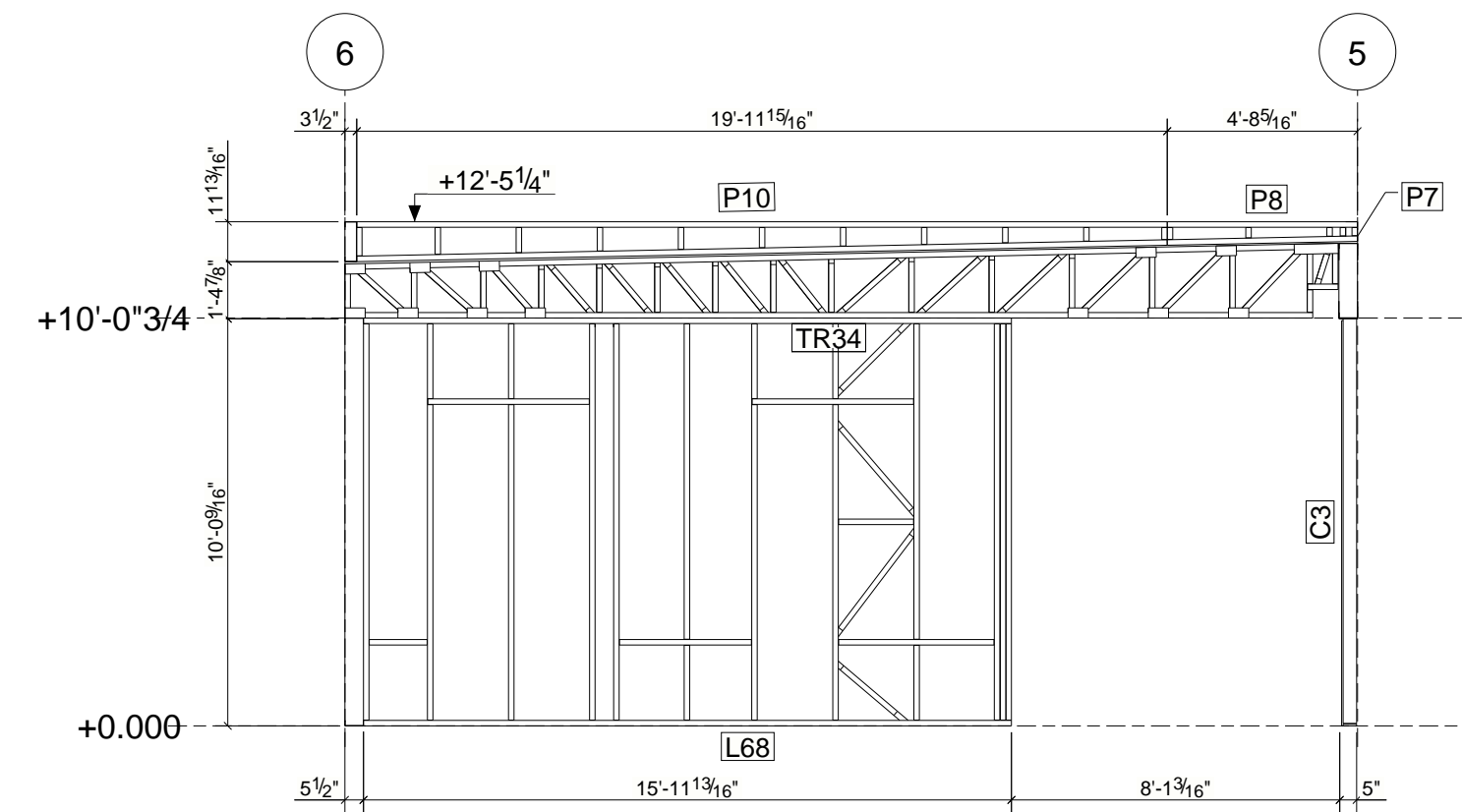
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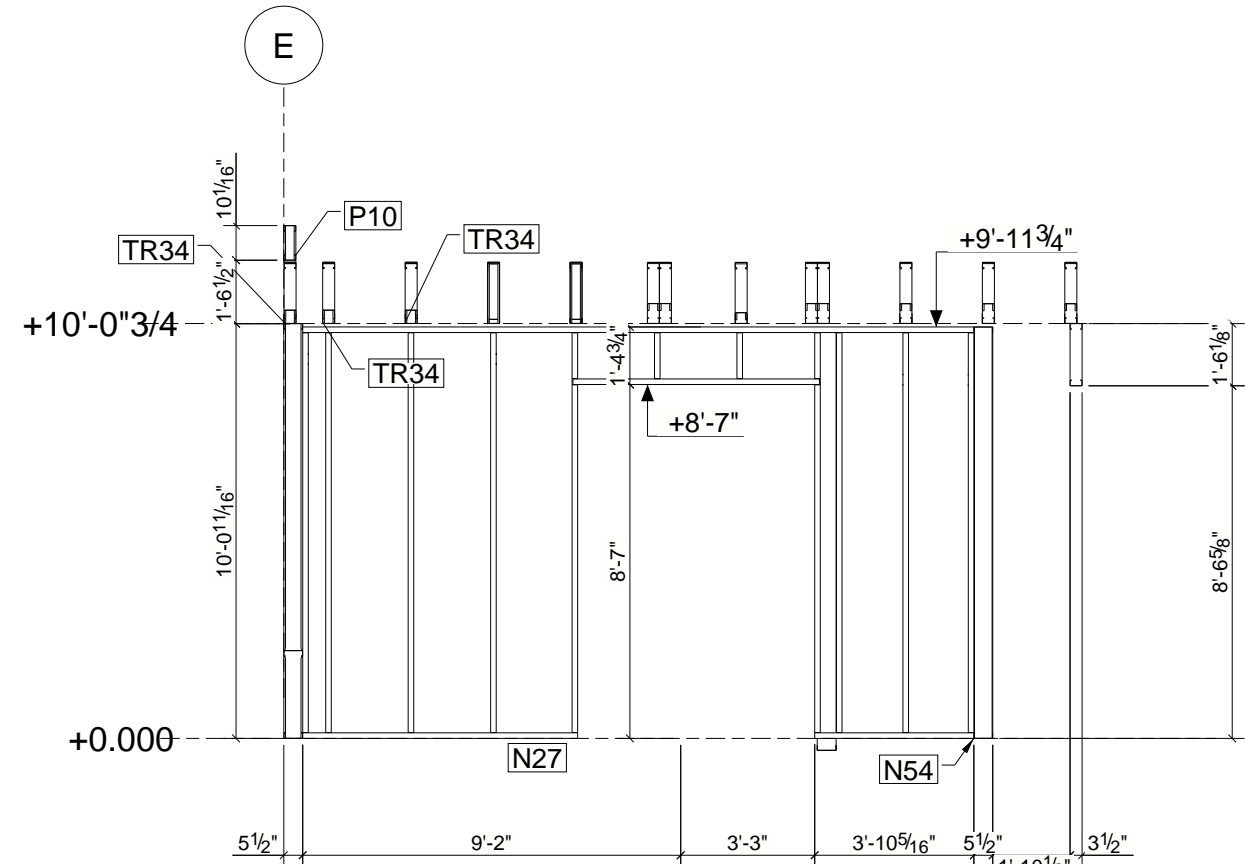




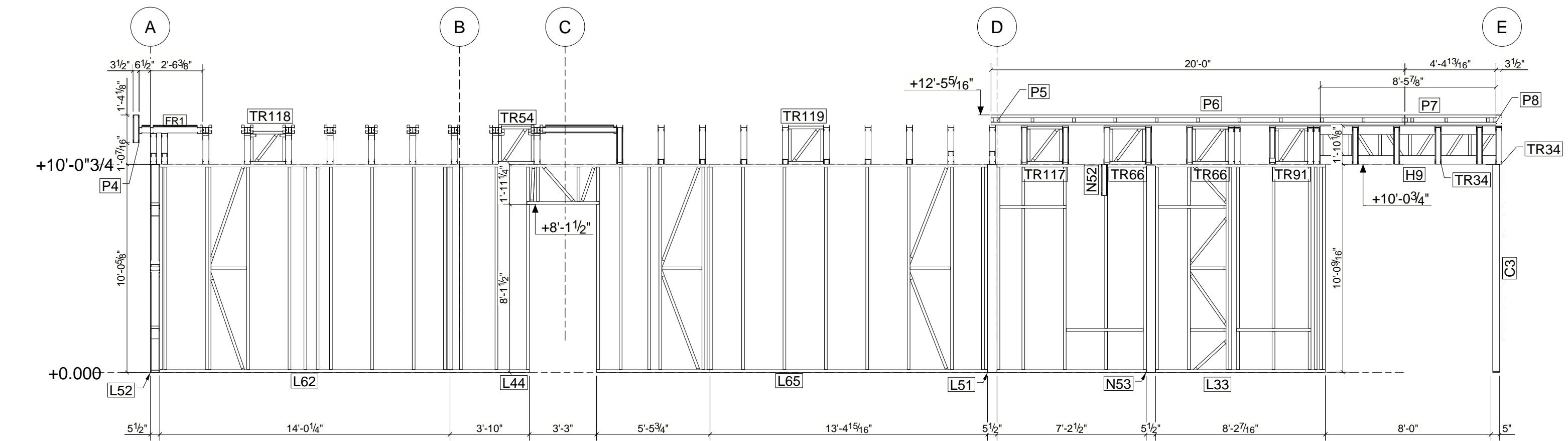
9 ELEVATION  
Scale: 1/4" = 1'-0"



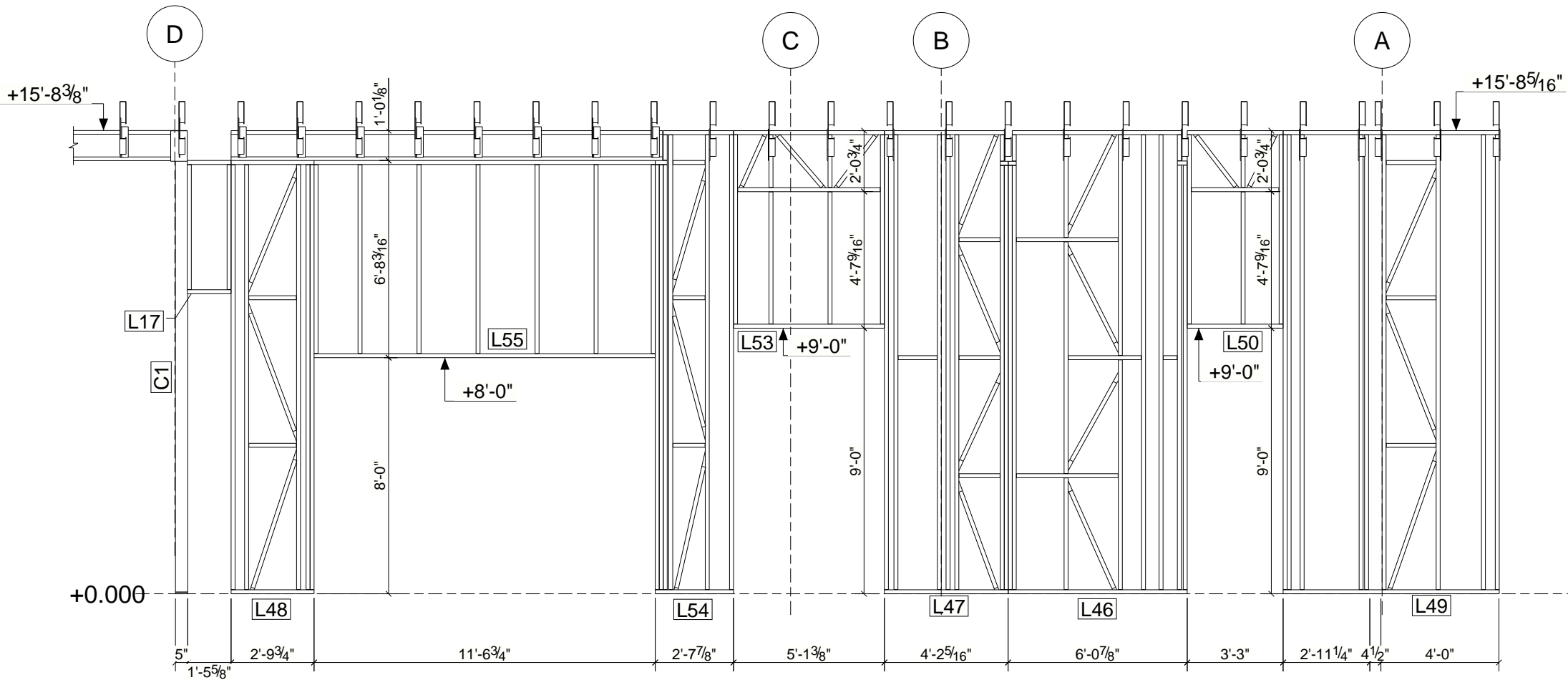
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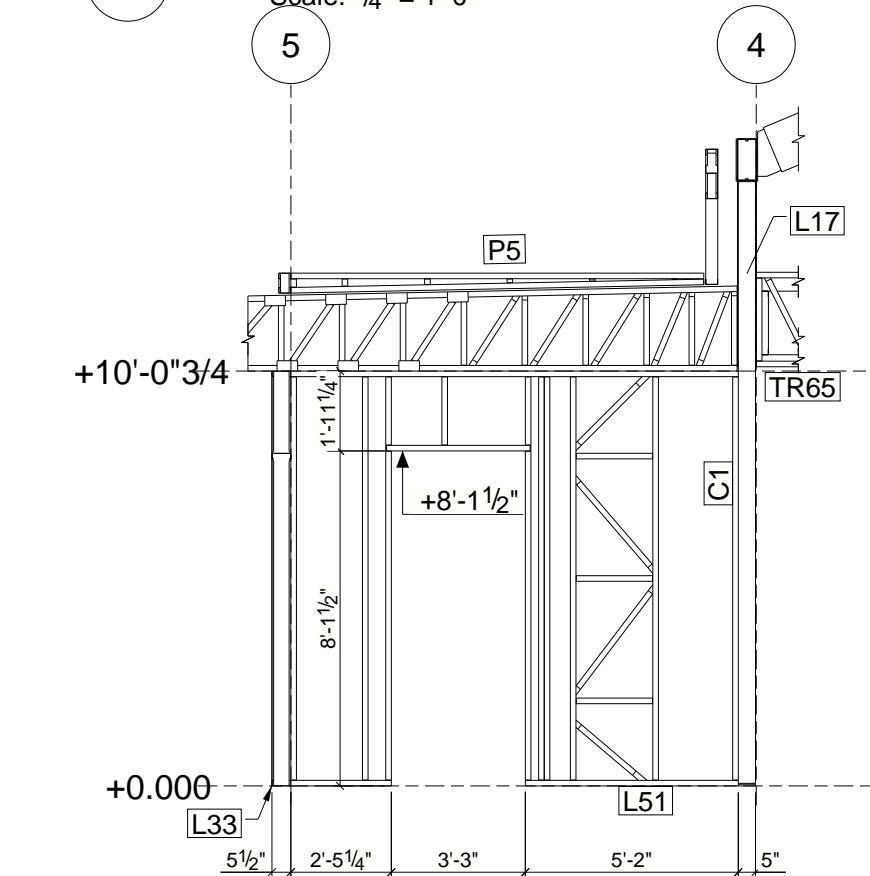
11 SECTION  
Scale: 1/4" = 1'-0"



12 SECTION  
Scale: 1/4" = 1'-0"

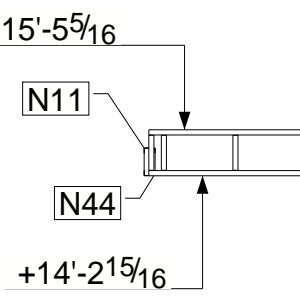


13 ELEVATION  
Scale: 1/4" = 1'-0"



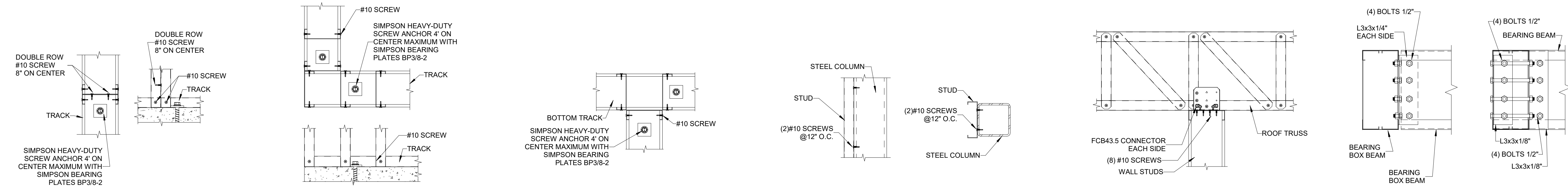
14 SECTION  
Scale: 1/4" = 1'-0"





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① TYPICAL WALL TO WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

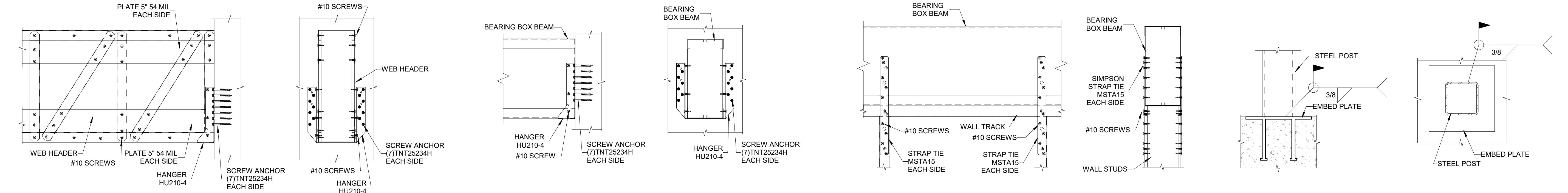
② TYPICAL WALL CORNER CONNECTION DETAIL  
1 1/2" = 1'-0"

③ TYPICAL WALL CORNER CONNECTION DETAIL  
1 1/2" = 1'-0"

④ TYPICAL WALL PANEL TO HSS COLUMN CONNECTION DETAIL  
1 1/2" = 1'-0"

⑤ TYPICAL ROOF TRUSS TO WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑥ BEARING BOX BEAMS CONNECTION DETAIL  
1 1/2" = 1'-0"

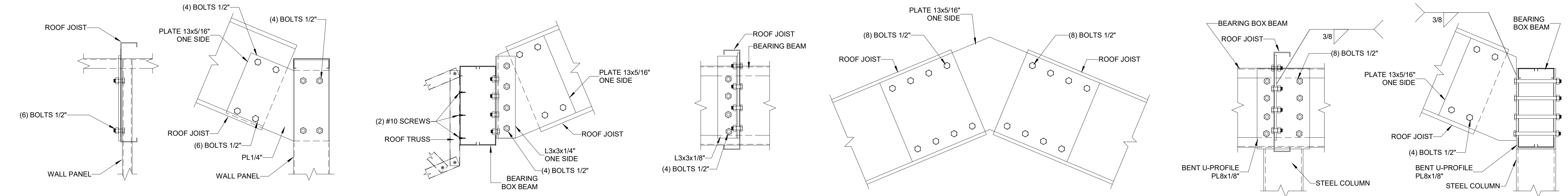


⑦ WEB HEADER TO CONCRETE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑧ BEARING BEAM TO CONCRETE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑨ CANTILEVER BEARING BEAM TO WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑩ HSS POST TO CONCRETE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

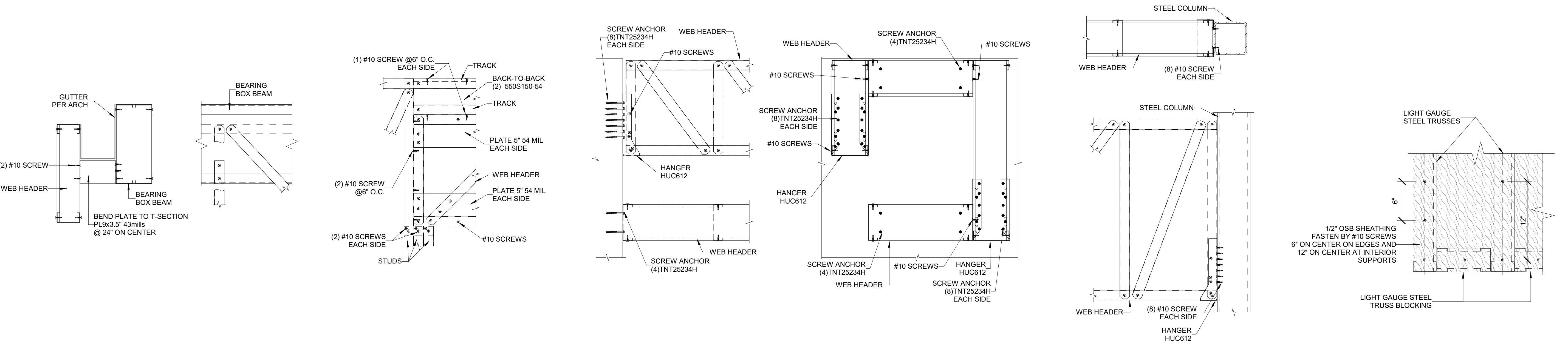


⑪ ROOF JOIST TO WALL PANEL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑫ ROOF JOIST TO BEARING BEAM CONNECTION DETAIL  
1 1/2" = 1'-0"

⑬ ROOF JOIST RIDGE CONNECTION DETAIL  
1 1/2" = 1'-0"

⑭ ROOF BEAM TO HSS COLUMN CONNECTION DETAIL  
1 1/2" = 1'-0"



⑮ WEB HEADER TO BEARING BEAM SIDE CONNECTION DETAIL  
1 1/2" = 1'-0"

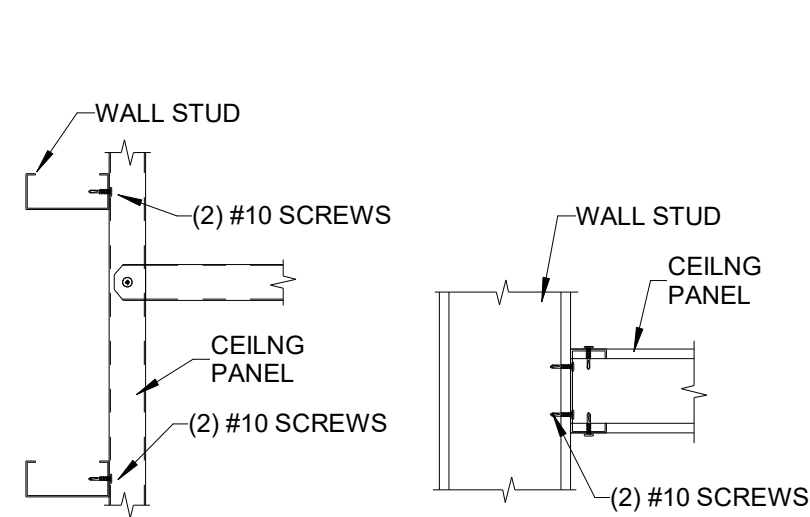
⑯ WEB HEADER TO GARAGE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑰ WEB HEADER TO CONCRETE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

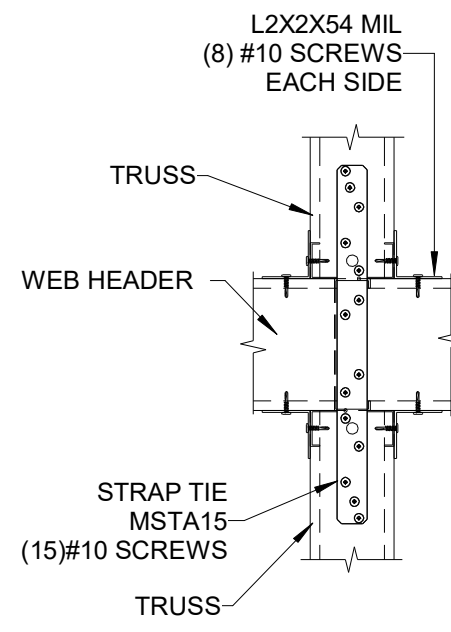
⑱ WEB HEADER TO CONCRETE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"

⑲ ROOF SHEATHING DETAIL  
1 1/2" = 1'-0"

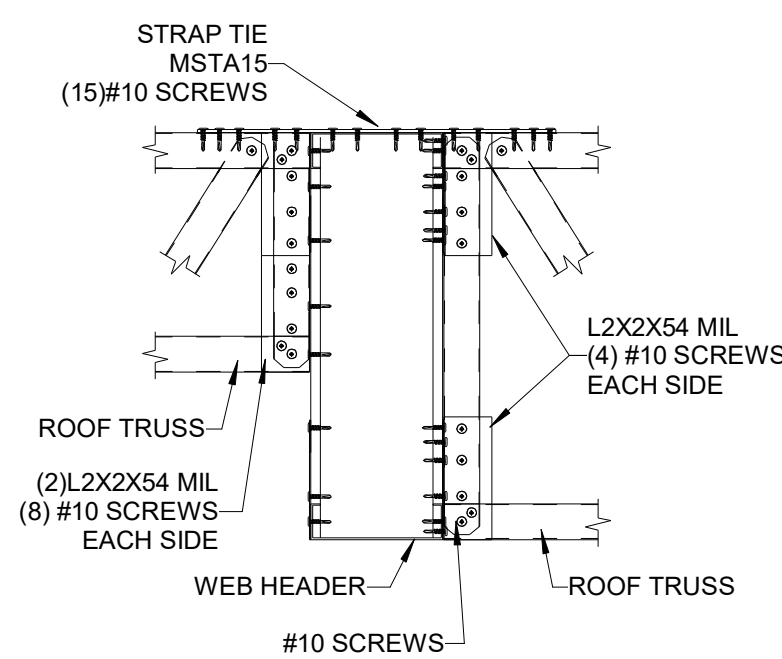




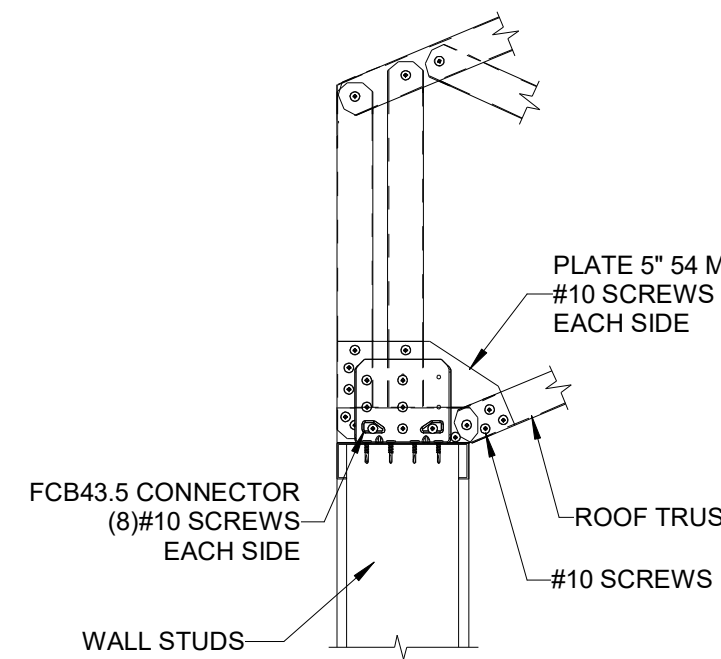
1 CEILING PANEL TO WALL STUD CONNECTION DETAIL  
1 1/2" = 1'-0"



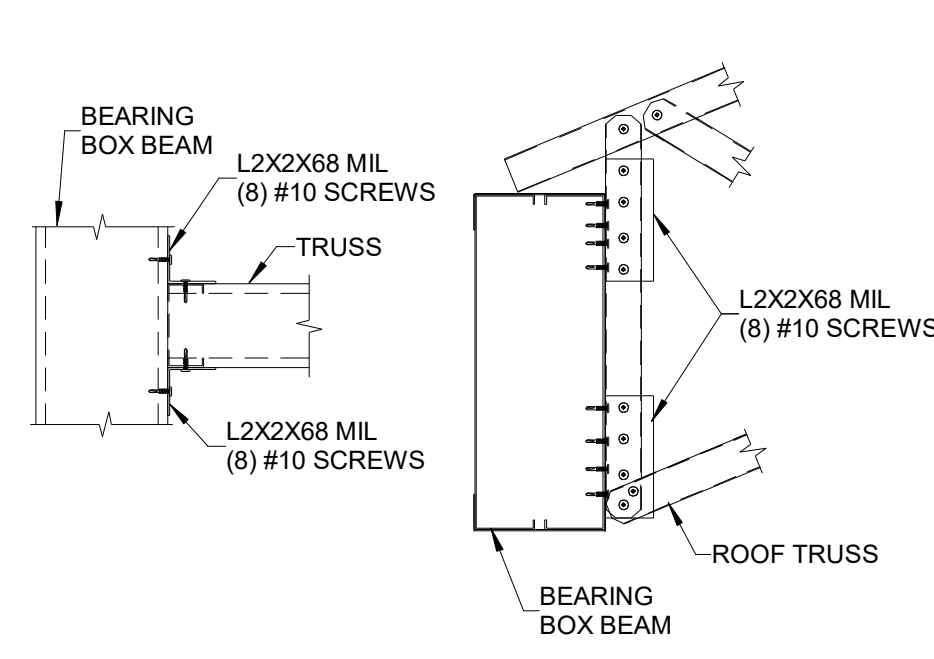
2 CANTILEVER TRUSS TO WEB HEADER CONNECTION DETAIL  
1 1/2" = 1'-0"



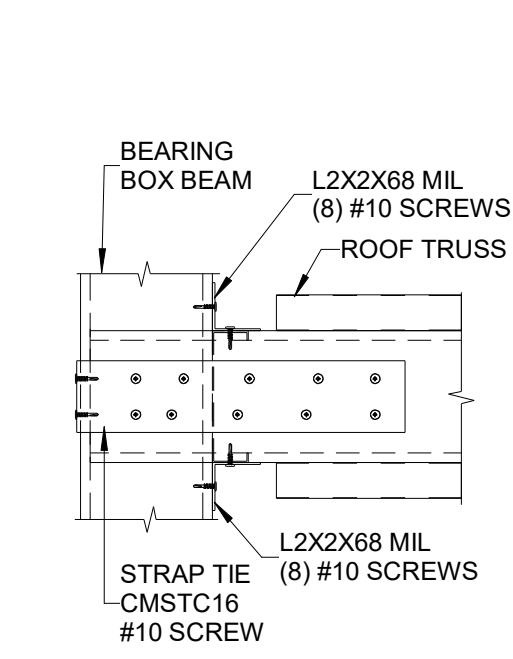
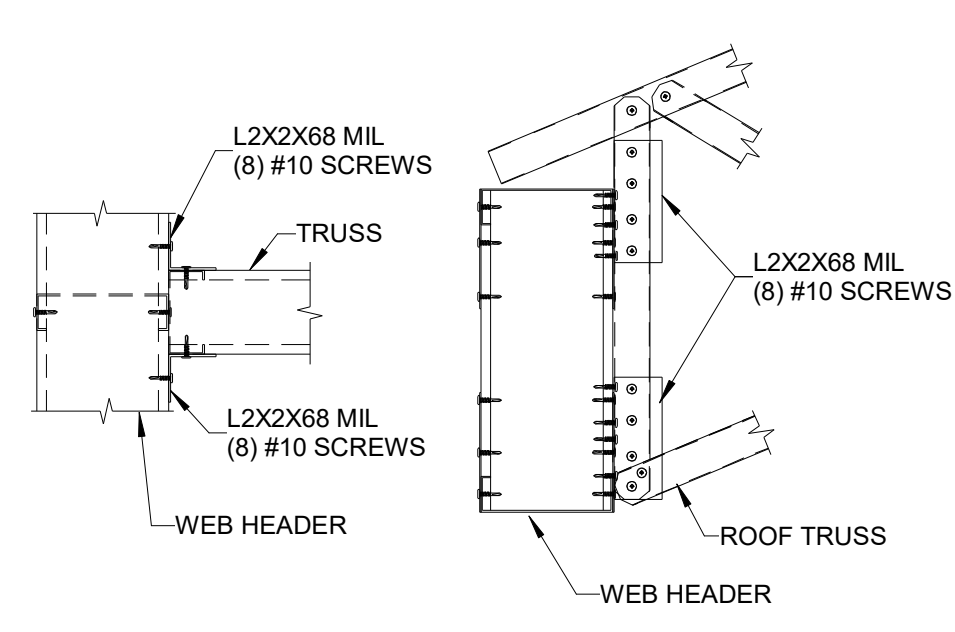
3 SLOPED ROOF TRUSS TO WALL CONNECTION DETAIL  
1 1/2" = 1'-0"



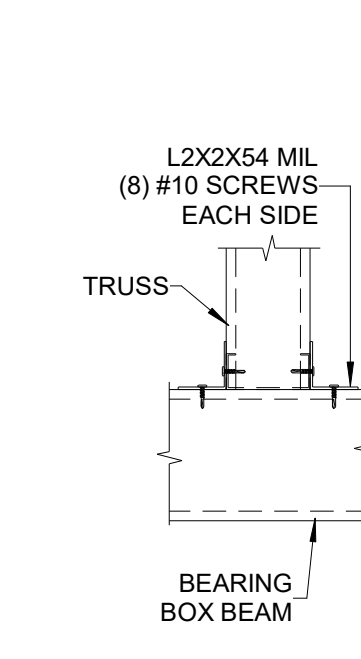
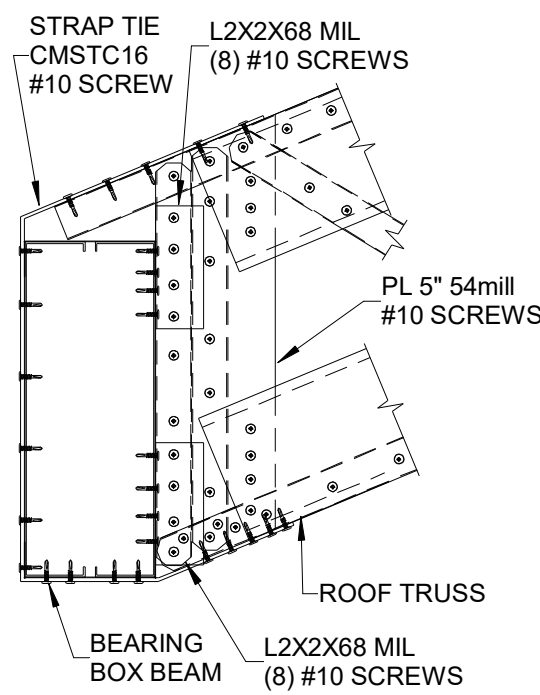
4 SLOPED TRUSS TO BOX BEAM CONNECTION DETAIL  
1 1/2" = 1'-0"



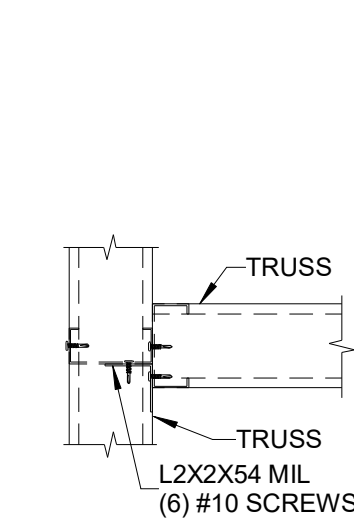
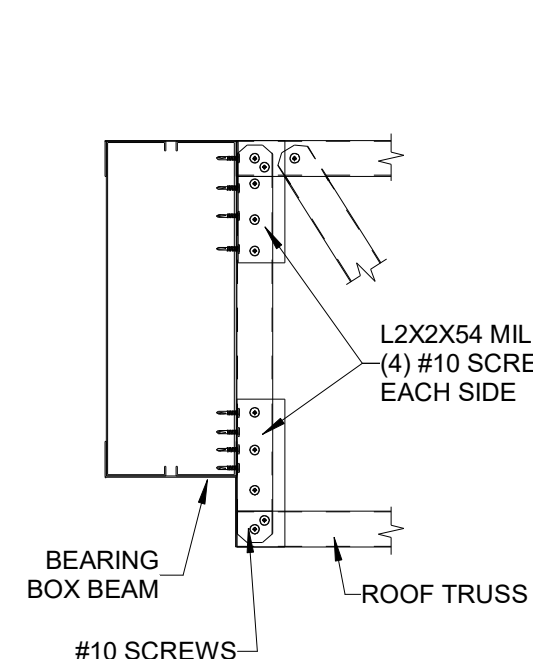
5 SLOPED TRUSS TO WEB HEADER CONNECTION DETAIL  
1 1/2" = 1'-0"



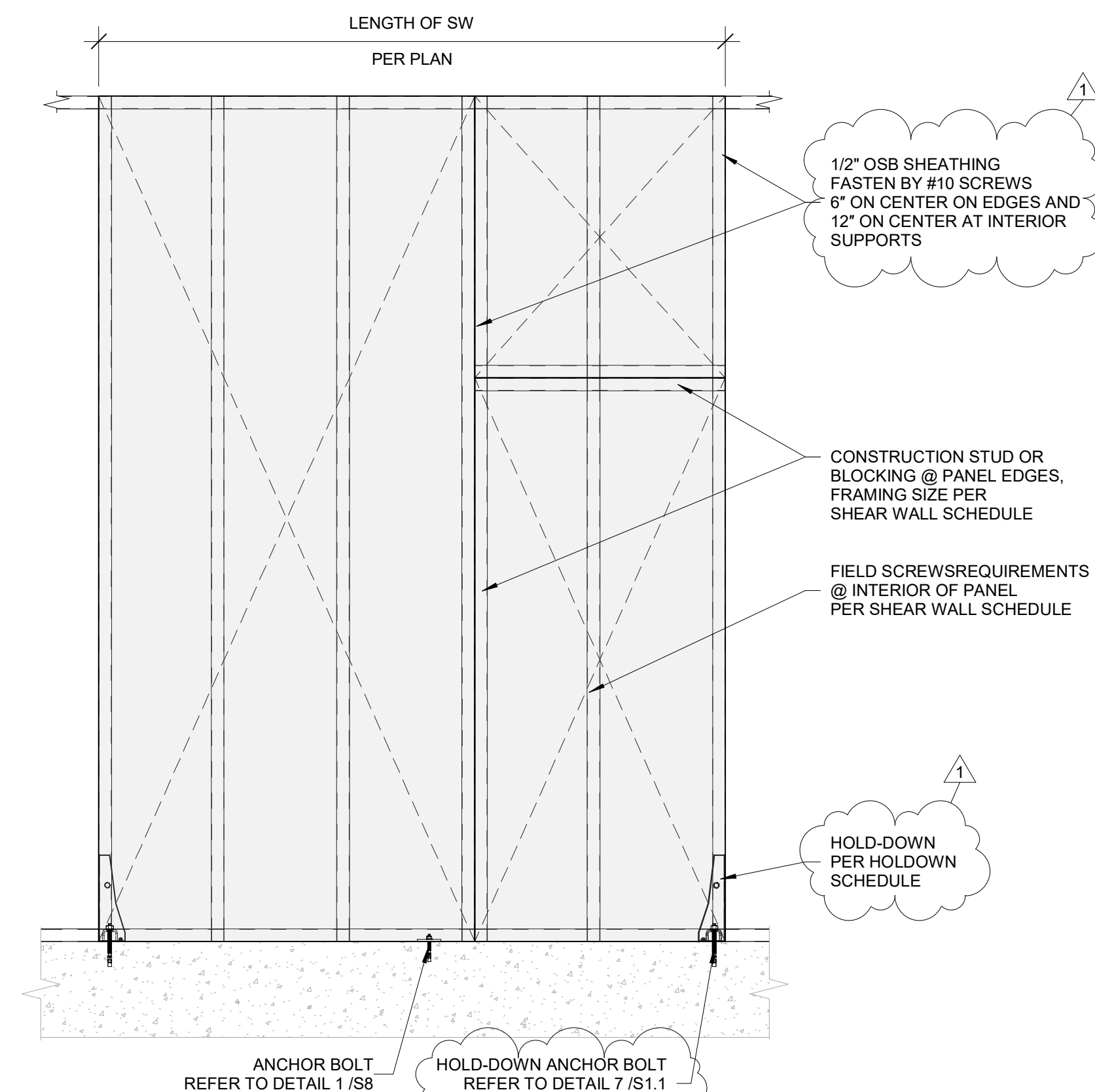
6 CANTILEVER TRUSS TO BOX BEAM CONNECTION DETAIL  
1 1/2" = 1'-0"



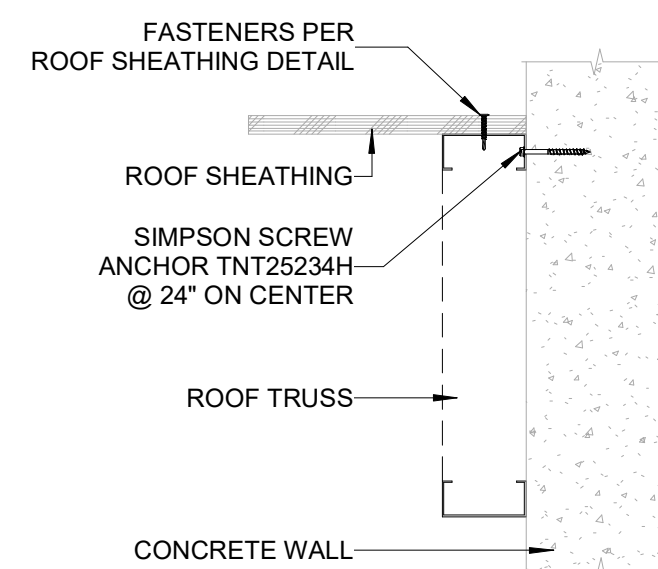
7 TRUSS TO BEARING BEAM CONNECTION DETAIL  
1 1/2" = 1'-0"



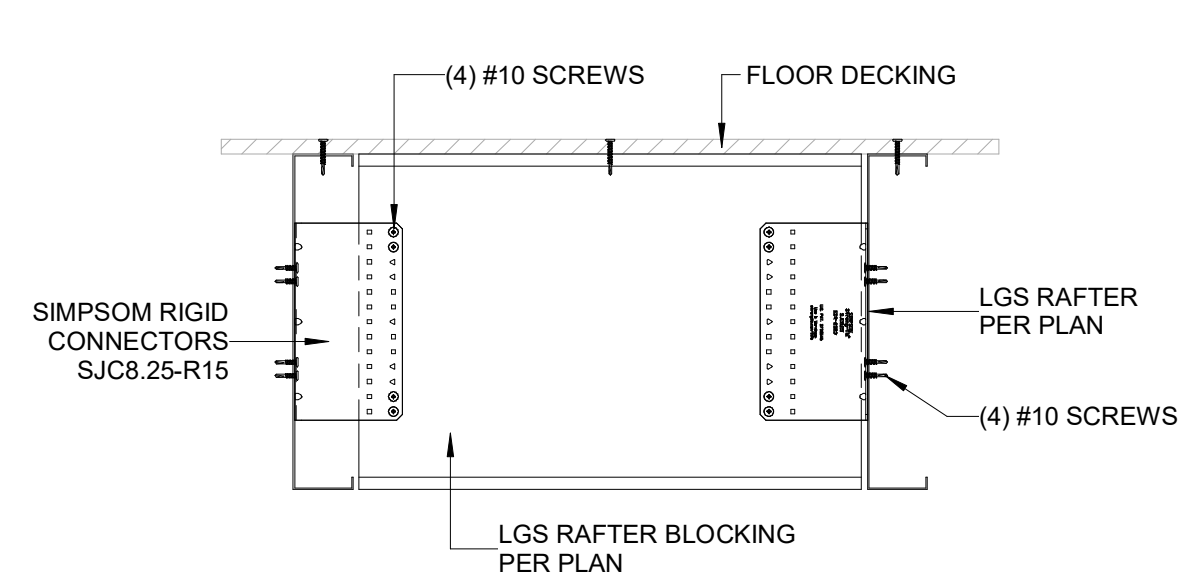
11 TRUSS BLOCKING TYPICAL CONNECTION DETAIL  
1 1/2" = 1'-0"



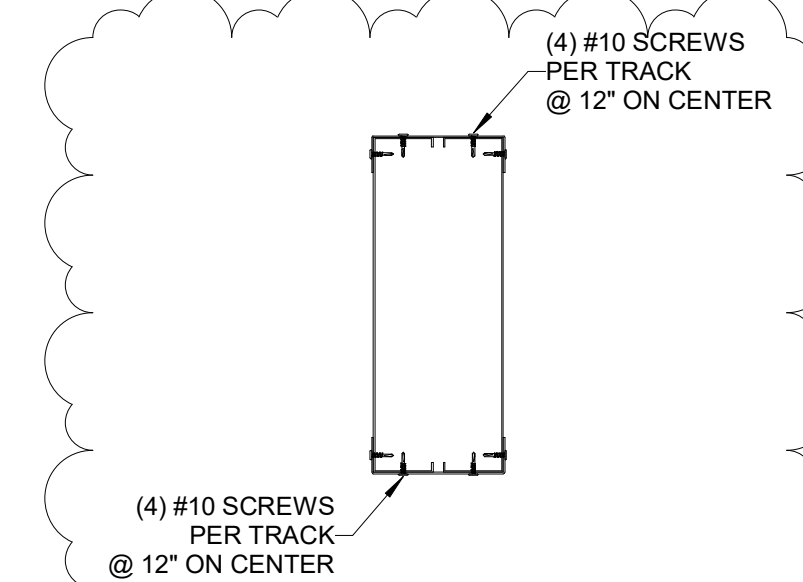
12 TYPICAL SHEAR WALL FRAMING  
3/4" = 1'-0"



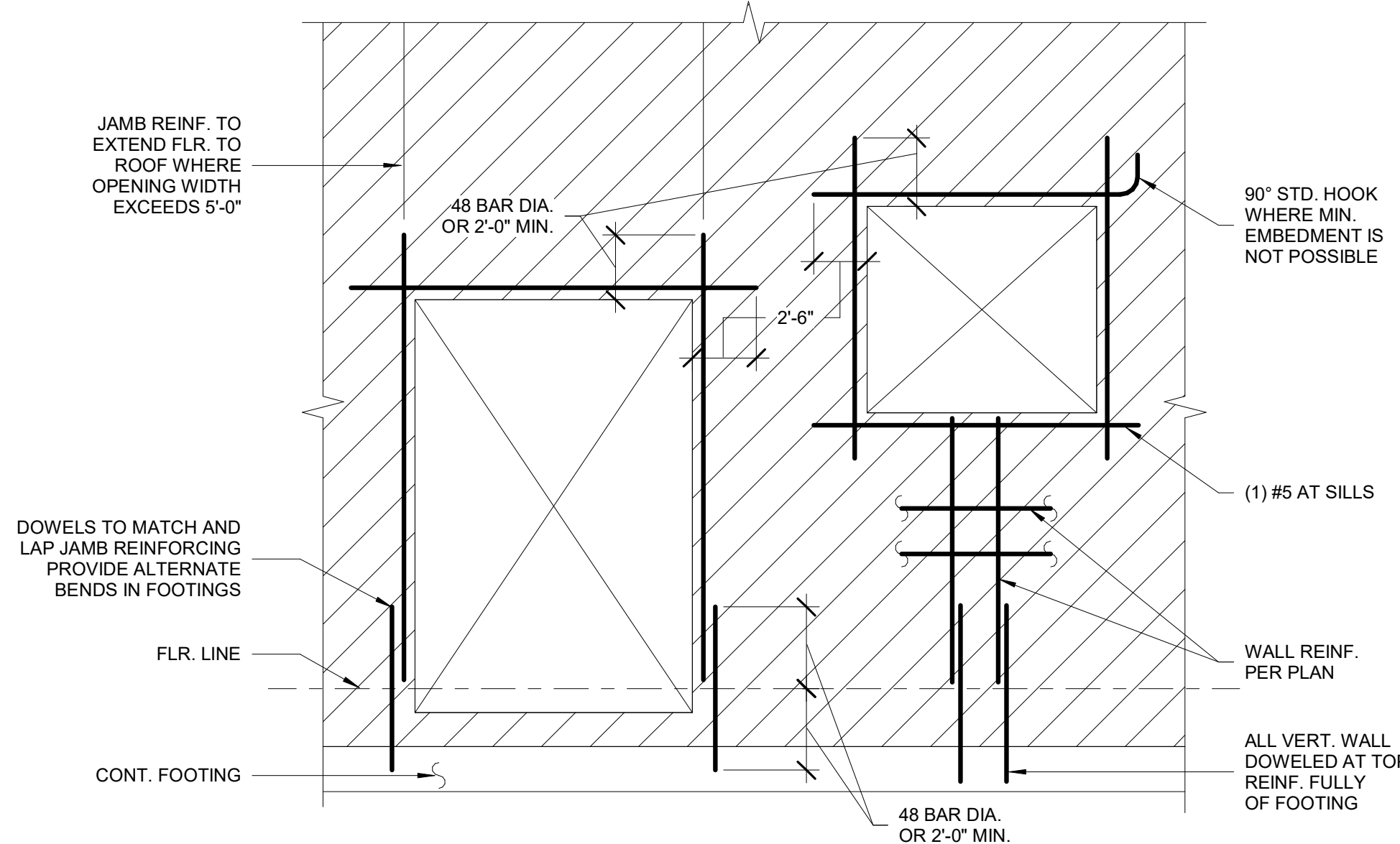
13 DRAG TRUSS TO CONCRETE WALL CONNECTION DETAIL  
1 1/2" = 1'-0"



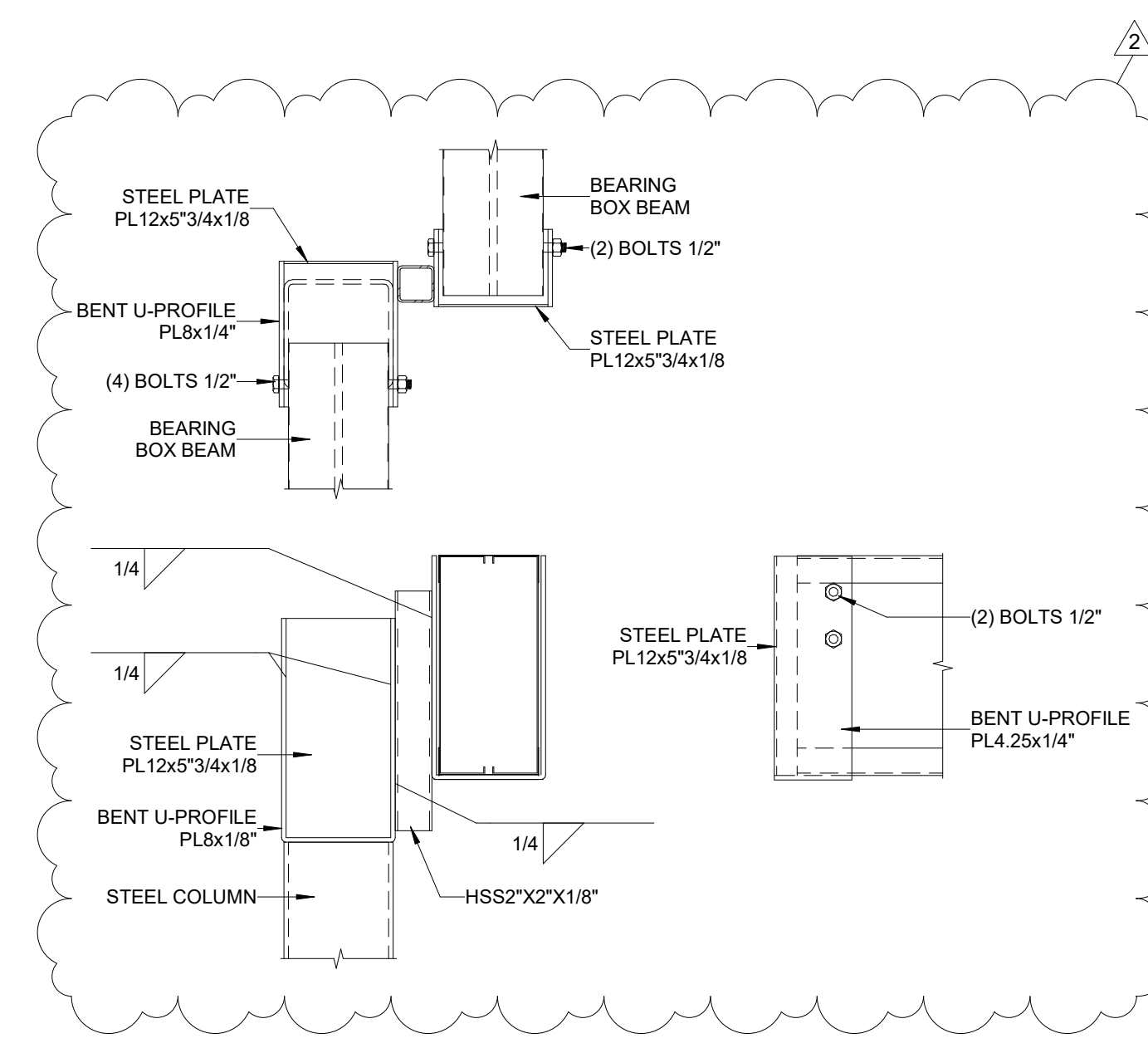
15 ROOF RAFTER BLOCKING TYPICAL  
1 1/2" = 1'-0"



16 BOX BEAM FASTENER DETAIL  
1 1/2" = 1'-0"



14 TYPICAL MASONRY WALL CONSTRUCTION  
3/4" = 1'-0"



17 ROOF BEAM TO HSS COLUMN CONNECTION DETAIL  
1 1/2" = 1'-0"

DRAWN BY  
IB  
CHECKED BY  
MK  
PROJECT NUMBER  
24-111

SHEET NUMBER:  
**S8.1**  
SHEET NAME:  
**FRAMING CONNECTION DETAILS**